



# Fernview Landfill (L9443/2024/1)

*Environmental Protection Act 1986 Licence*

**Fernview Environmental Pty Ltd**

**Annual Environmental Report (2025)**

JBS&G Australia Pty Ltd | 70121 | Rev 0

27 March 2026





**We acknowledge the Traditional Custodians of Country throughout Australia and their connections to land, sea and community.**

We pay respect to Elders past and present and in the spirit of reconciliation, we commit to working together for our shared future.

Caring for Country The Journey of JBS&G  
Artist: Patrick Caruso, Eastern Arrernte

## Table of Contents

<b>Abbreviations</b>	<b>3</b>
<b>1. Introduction</b>	<b>4</b>
1.1 Project Background	4
1.2 Environmental Approval to Implement the Project	4
<b>2. Current Status</b>	<b>4</b>
<b>3. Reporting Summary</b>	<b>4</b>
<b>4. Waste Accepted / Rejected</b>	<b>6</b>
<b>5. Stormwater Management System Monitoring</b>	<b>6</b>
5.1 Erosion around Landfill Cell 1 and stormwater management structures	6
5.2 Check vegetation for signs of deterioration due to surface water flow paths	7
5.3 Monitor water levels within the stormwater pond	7
<b>6. Groundwater and Surface Water Monitoring</b>	<b>7</b>
<b>7. Audit Methodology</b>	<b>7</b>
7.1 Audit Plan	7
7.1.1 Purpose & Scope	7
7.1.2 Timeframe	7
7.1.3 Methodology	8
7.1.4 Terminology	8
<b>8. Audit Results</b>	<b>8</b>
8.1 Summary of Compliance	8
<b>9. New Environmental Risks</b>	<b>10</b>
<b>10. Limitations</b>	<b>11</b>

## List of Tables

Table 3.1: Environmental Reporting Requirements	4
Table 4.1: Waste Accepted in 2025	6
Table 7.1: Key Personnel Consulted for the Audit	8
Table 7.2: Terminology used for the Audit	8
Table 8.1: Non-compliance and Corrective Actions	9
Table B.1: L9443/2024/1 Part V Licence Audit Table	13
Table D.1: Evidence Register	28

## Appendices

Appendix A	Annual Audit Compliance Report .....	12
Appendix B	Licence Compliance Assessment.....	13
Appendix C	Part V Licence L9443/2024/1.....	27
Appendix D	Evidence Register .....	28
Appendix E	Annual Groundwater Monitoring Report.....	31

## Abbreviations

Term	Definition
EP Act	<i>Environmental Protection Act 1986</i>
Fernview	Fernview Environmental Pty Ltd
L9443	Environmental Protection Act 1986 Licence L9443/2024/1
AER	Annual Environmental Report

# 1. Introduction

This report addresses the status and compliance of *Environmental Protection Act 1986* (EP Act) Part V Licence L9443/2024/1 (L9443) for the Fernview Environmental Pty Ltd (Fernview) Gingin Regional Landfill at Lot 98 Wannamal Road South Cullala, Western Australia. This report has been prepared for the purpose of meeting the requirements of condition 41 and 42 of L9443, which requires the proponent to undertake an audit of compliance with conditions of the licence and prepare and provide a report with the required information.

## 1.1 Project Background

Fernview is developing the Gingin bioreactor landfill facility. The Project is located approximately 100 km north of Perth, WA. The project is to construct and operate a landfill accepting Class II-type waste with six cells and a landfill gas collection system and utilisation plant facility. The facility is to have a total operational lifetime of not more than 30 years.

## 1.2 Environmental Approval to Implement the Project

The Project was assessed as a controlled action under the EPBC Act due to the potential for significant impacts on listed threatened species. The Project was approved with conditions on 24 October 2019.

The landfill facility had State environmental approval under Ministerial Statement 976 with additional conditions under Ministerial Statement 1073.

The Landfill Facility had an approved Development Application (DAP Application DAP/15/00918) and was constructed under EP Act Works Approval W6083/2017/1.

L9443 was issued 19/11/2024 for the duration 19/11/2024 to 19/11/2044.

# 2. Current Status

Construction of the landfill facility commenced 06/04/2020. Landfill operations commenced in September 2025 with the first waste accepted on 16/09/2025. This report is applicable to the reporting period 19/11/2024 to 31/12/2025.

# 3. Reporting Summary

Table 3.1 contains a summary of the reporting requirements for the reporting period (19/11/2024 to 31/12/2025).

**Table 3.1: Environmental Reporting Requirements**

Condition	Requirement	Status / Relevant Section
	Summary of the active landfill area and special waste disposal area that includes:	
42	a) areas that have been subject to waste deposition for the annual period;	The entire base of Cell 1 has been subject to waste deposition in the annual period.
	b) remaining void capacity for waste deposition in Landfill Cell 1 at the end of the annual period; and	138,000 tonnes remaining capacity
	c) summary to any alterations to cell rehabilitation sequencing and timing.	Not applicable.
6	A summary of all fire incidents that have occurred during the annual period.	No fire incidents occurred in the annual period.
27,28	Tonnage of wastes accepted/rejected for each waste type during the annual period in table format.	Section 4.

Condition	Requirement	Status / Relevant Section
29	A summary of monitoring undertaken in relation to the stormwater management system, including data/observations in a table format for the annual period.	Section 5.
30-33	A summary of leachate monitoring undertaken, including monitoring data in a table format for the annual period.	Not applicable as no leachate produced in the annual period.
30-33	A summary of action taken within the annual period to address exceedances of the leachate operational levels.	Not applicable as no leachate produced in the annual period.
34,35, and 36	<p>A groundwater and surface water monitoring report demonstrating compliance with conditions 34, 35, and 36, which includes:</p> <ul style="list-style-type: none"> <li>a) a clear statement of the scope of work carried out;</li> <li>b) a description of the field methodologies employed;</li> <li>c) a summary of the field and laboratory quality assurance/quality control (QA/QC) program;</li> <li>d) copies of the field monitoring records and field QA/QC documentation;</li> <li>e) an assessment of reliability of field procedures and laboratory results;</li> <li>f) a tabulated summary of results, as well as the raw data provided in an accompanying Microsoft Excel spreadsheet digital document/file (or a compatible equivalent digital document/file), with all results being clearly referenced to laboratory certificates of analysis;</li> <li>g) a diagram with aerial image overlay showing all monitoring locations;</li> <li>h) an interpretive summary and assessment of the results against relevant assessment levels for water, as published in the Guideline: Assessment and management of contaminates sites;</li> <li>i) an interpretive summary and assessment of results against previous monitoring results;</li> <li>j) trend graphs to provide graphical representation of historical results and to support the interpretive summary."</li> </ul>	Section 6.
37	Plan of disposal locations for Special Waste Type 2	No Special Waste Type 2 accepted in the reporting period.
38	Complaints summary for the annual period	No complaints received for the reporting period.

## 4. Waste Accepted / Rejected

Tonnage of wastes accepted/rejected for each waste type during the annual period in table format.

**Table 4.1: Waste Accepted in 2025**

Waste Type	Waste Accepted	Waste Rejected
INERT		0
C&D Waste (Mixed C&D Waste)	11,674.04 tonnes	
C&D Waste (Mixed inert waste)	11.78 tonnes	0
PUTRESIBLE		
Mixed Putrescible Waste (Mixed putrescible waste - C&I)	42.4 tonnes	0
Mixed Putrescible Waste (Mixed putrescible waste – other)	40.94 tonnes	0
Total	11,769.16 tonnes	0 tonnes

## 5. Stormwater Management System Monitoring

### 5.1 Erosion around Landfill Cell 1 and stormwater management structures.

The licence holder checked for the presence of erosion around Landfill Cell 1 and the stormwater management structures in the reporting period. Results of the monitoring found that erosion was required to be ameliorated with wood mulch.



Figure 1: Erosion observed around Cell 1



Figure 2: Zoom in



Figure 2: Wood mulch placed to ameliorate erosion around Cell 1

## 5.2 Check vegetation for signs of deterioration due to surface water flow paths.

The licence holder did not observe signs of vegetation deterioration due to surface water flow paths in the reporting period. No written records were kept of observations being made.

## 5.3 Monitor water levels within the stormwater pond.

The licence holder reported that monitoring in the reporting period showed that rainfall immediately infiltrated as it fell and no rainwater accumulated in the stormwater pond.

# 6. Groundwater and Surface Water Monitoring

The landfill commenced operating 16/08/2025. No surface water monitoring was undertaken in the reporting period.

Appendix E contains the Annual Groundwater Monitoring Report. The report contains:

- a) a clear statement of the scope of work carried out;
- b) a description of the field methodologies employed;
- c) a summary of the field and laboratory quality assurance/quality control (QA/QC) program;
- d) copies of the field monitoring records and field QA/QC documentation;
- e) an assessment of reliability of field procedures and laboratory results;
- f) a tabulated summary of results;
- g) a diagram with aerial image overlay showing all monitoring locations;
- h) an interpretive summary and assessment of the results against relevant assessment levels for water, as published in the Guideline: Assessment and management of contaminates sites;
- i) an interpretive summary and assessment of results against previous monitoring results;

The report does not contain trend graphs at this stage as historical baseline data is being requested from a previous consultant.

The evidence register (Appendix D) contains the raw data (E10) provided in an accompanying Microsoft Excel spreadsheet digital document/file, with all results being clearly referenced to laboratory certificates of analysis

# 7. Audit Methodology

## 7.1 Audit Plan

### 7.1.1 Purpose & Scope

This document has been prepared for Fernview (the proponent) to fulfil the requirements of condition 41 of L9443. Condition 41 states:

*“The licence holder must:*

- a) *undertake an audit of their compliance with the conditions of this licence during the preceding annual period, and*
- b) *prepare and submit to the CEO an Annual Audit Compliance Report in the approved form by 31 March each year.”*

### 7.1.2 Timeframe

This Annual Environmental Report (AER) addresses the audit period between 19 November 2024 and 31 December 2025.

### 7.1.3 Methodology

The audit was undertaken in March 2026 by Andrea Wills (Consultant, JBS&G) and involved a site inspection and desktop assessment of compliance against conditions where evidence was requested from the proponent to certify that the conditions were met. Consultation via phone calls and email with personnel listed in Table 7.1 was undertaken during the audit.

**Table 7.1: Key Personnel Consulted for the Audit**

Personnel	Position	Organisation
Tom Rudas	Managing Director	Fernview Environmental
Damian Flugge	Operator	Fernview Environmental
Andre Stass	Principal Environmental Engineer	Stass Environmental

### 7.1.4 Terminology

The 'Status' field of audit table (refer to Appendix B) describes the level of compliance against L9443 conditions. Compliance terminology that has been applied in the audit is listed below in Table 7.2.

**Table 7.2: Terminology used for the Audit**

Status	Description
Compliant	'Compliance' is achieved when all the requirements of a condition have been met, including the implementation of management plans or other measures required by those conditions.
Non-compliant	A designation of 'non-compliant' must be given where the requirements of a condition or elements of a condition, including the implementation of management plans and other measures, have not been met.
Not Applicable	A designation of 'not applicable' must be given where the requirements of a condition or elements of a condition fall outside of the scope of the current reporting period. For example, a condition that applies to an activity that has not yet commenced.

## 8. Audit Results

The results of the audit of L9443/2024/1 are shown in Table B.1. A total of 17 conditions were audited from L9443/2024/1.

### 8.1 Summary of Compliance

A total of 35 sub-conditions were audited in Table B.1 below. The following audit results were determined:

- 38 conditions were assessed to be Compliant;
- 24 conditions were assessed to be 'Not applicable'; and
- Seven conditions were found to be 'Non-compliant'.

The non-compliances identified were as per Table 8.1.

**Table 8.1: Non-compliance and Corrective Actions**

Condition	Non-compliance	Details	Corrective Action	Status
1-8	The portable fire extinguishers and firefighting foam required to be provided on site was not in place as required by the licence	This non-compliance was detected during site inspection by JBS&G on 16/03/2026. The department have not been notified of this non-compliance. The licence holder is procuring the required fire extinguishers and liquid foam required to meet the licence conditions and will be completed by 30/04/2026.	Procure dry chemical powder ABE fire extinguishers for the fuel service vehicle, diesel tank, crib room, shed and weighbridge.	Open
1-10	The water truck required by the licence did not meet the volume 14,000L or foam specifications of the licence	This non-compliance was detected during site inspection by JBS&G on 16/03/2026. The department have not been notified of this non-compliance. The licence holder is investigating how to achieve compliance with this condition.	Establish foam capability on the water truck and procure 20L drums of firefighting foam.	Open
7(a)	firefighting equipment and systems are in good working order and capable of controlling and extinguishing a waste material fire within the premises;	Refer to non-compliance with condition 1-8 and condition 1-10.	Refer to non-compliance with condition 1-8 and condition 1-10.	Open
17 & 18	The Odour Management Plan has not been prepared or submitted to the CEO.	This non-compliance occurred after the plan was due 30/06/2025. The Odour Management Plan is currently being prepared.	Submit the OMP by 30/06/2026	Open
21	No vermin prevention measures have been implemented.	The Feral and Pest Animal Management Plan was under review in the reporting period and has not been implemented, as such no vermin prevention measures have been implemented. The Department has not been previously notified of this non-compliance. Monitoring equipment and baits will be installed in the 2026 reporting period.	Install monitoring equipment by 30/06/2026 Install baits by (where required) by 31/08/2026.	Open
30-1	The base of the leachate sump and base formation of the landfill have not been measured prior to the operation of the landfill.	This non-compliance was detected during site inspection by JBS&G on 16/03/2026. The department have not been notified of this non-compliance. The licence holder will make these measurements prior to leachate being introduced into the system.	Measurements to be prior to leachate entering the system.	Open

## 9. New Environmental Risks

The licence holder found that wood mulch was successful in managing erosion around the facility in the reporting period and procured approximately 4,000 m<sup>3</sup> of recycled Jarrah timber mulch to assist with the ongoing management of erosion at the facility.

No new environmental risks have become apparent during the reporting period. That includes new pests or diseases, new information on groundwater levels etc.

## 10. Limitations

### Scope of Services

This report ('the report') has been prepared by JBS&G in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and JBS&G. In some circumstances, a range of factors such as time, budget, access and/or site disturbance constraints may have limited the scope of services. This report is strictly limited to the matters stated in it and is not to be read as extending, by implication, to any other matter in connection with the matters addressed in it.

### Reliance on Data

In preparing the report, JBS&G has relied upon data and other information provided by the Client and other individuals and organisations, most of which are referred to in the report ('the data'). Except as otherwise expressly stated in the report, JBS&G has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report ('conclusions') are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. JBS&G has also not attempted to determine whether any material matter has been omitted from the data. JBS&G will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to JBS&G. The making of any assumption does not imply that JBS&G has made any enquiry to verify the correctness of that assumption.

The report is based on conditions encountered and information received at the time of preparation of this report or the time that site investigations were carried out. JBS&G disclaims responsibility for any changes that may have occurred after this time. This report and any legal issues arising from it are governed by and construed in accordance with the law as at the date of this report.

### Environmental Conclusions

Within the limitations imposed by the scope of services, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted environmental consulting practices. No other warranty, whether express or implied, is made.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

JBS&G accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced without prior approval by the client or amended in any way without prior approval by JBS&G, and should not be relied upon by other parties, who should make their own enquiries.

## Appendix A Annual Audit Compliance Report

## Appendix B Licence Compliance Assessment

Table B.1: L9443/2024/1 Part V Licence Audit Table

Condition No.	Condition Factor	Condition	Timing	Evidence	Determination	Compliance Finding
	Infrastructure and equipment	The licence holder must ensure that the site infrastructure and equipment listed in <b>Table 1</b> and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in <b>Table 1</b> .				
1-1	Infrastructure and equipment	Landfill Cell 1 a) The landfill cell must be maintained in good condition, free from leaks and defects.	Ongoing	P16_Landfill IMG_0983	The landfill is maintained in good condition by landfill design and utilising serviced equipment and undertaking daily prestart inspections.	Compliant
1-2	Infrastructure and equipment	Leachate collection, extraction and recirculation system a) All leachate pipes, gravity feeds and pumps must be free of blockage, leaks and defects; b) All leachate sumps must be maintained free of leaks and defects. c) All leachate removed from the leachate sumps must be directed to the leachate pond or recirculated onto the landfill surface. d) A leachate head of less than 300 mm must be maintained above the landfill base liner system. e) Probes must be operational to identify variations in leachate head levels. f) Recirculation system must be maintained to ensure correct operation in the conveyance of leachate to active landfill cells for recirculation. g) The leachate detection system must be capable of directing leachate leakage from the entire area of the Cell 1 Landfill footprint to the monitoring point where it can be monitored and extracted.	Ongoing	M02_Site Inspection Notes 16/03/2026	The leachate collection, extraction and recirculation system has not been utilised in the reporting period. Maintenance will be required in the next reporting period.	Not applicable
1-3	Infrastructure and equipment	Leachate Pond a) Leachate pond liner must be maintained in good condition, free from leaks and defects. b) A 1000 mm freeboard must be maintained at all times. c) The pond must not overtop. d) Probes must be operational to identify high leachate levels. e) Leachate is not to be used for any purpose on the premises other than recirculation back onto the landfill to assist with waste decomposition.	Ongoing	M02_Site Inspection Notes 16/03/2026	In the reporting period: <ul style="list-style-type: none"> <li>The leachate pond liner was maintained in a good condition</li> <li>There was no leachate in the system</li> <li>Only minimal rainfall fell directly into the leachate pond so the 1000 mm freeboard was maintained at all times, and the leachate pond did not overtop.</li> <li>No leachate was used in the reporting period.</li> </ul>	Compliant
1-4	Infrastructure and equipment	Stormwater management system (Sediment Pond and associated drains) a) The surface water management system must be maintained to prevent stormwater runoff from becoming contaminated by waste on the premises.	Ongoing	Site inspection 22/09/2025 Site inspection 24/02/2026	No stormwater runoff was contaminated by waste on the premises in the reporting period.	Compliant
1-5	Infrastructure and equipment	Fuel storage tank a) Must be labelled with appropriate placards. b) Must be self-bunded. c) Must hold a maximum of 60,000 L of fuel. d) All fuel lines must have the option to be switched off. e) Areas around the tank to be kept clean and free of waste build-up.	Ongoing	P08_Diesel Tank IMG_0943 Site inspection 24/02/2026	The fuel storage tank is (P08): <ul style="list-style-type: none"> <li>Marked "diesel" with the safe fill level, labelled "Combustible Liquid" 100mm in black on white background,</li> <li>Self-bunded</li> <li>Holds 10,000L</li> </ul>	Compliant

Condition No.	Condition Factor	Condition	Timing	Evidence	Determination	Compliance Finding
					<p>d) The fuel pump is passcode protected (only turns on when pin code is entered).</p> <p>e) Located with a concrete clean down bund clear and free of waste build-up.</p> <p>OFI: Install a No smoking/no ignition sign near the diesel tank fill point.</p>	
1-6	Infrastructure and equipment	150,000 L water tank for reticulation and dust suppression a) Must be readily accessible, clearly signposted and in good condition.	Ongoing	P17_Fire Tank 150kL IMG_0978	The water tank for reticulation and dust suppression is marked Firewater Tank Effective Capacity 162.6kL.	Compliant
1-7	Infrastructure and equipment	100,000 L firefighting water storage tank a) Must be readily accessible, clearly signposted and in good condition.	Ongoing	P18_Fire Tank 100kL IMG_0979	The water tank for reticulation and dust suppression is marked Firewater Tank Effective Capacity 107.4kL.	Compliant
1-8	Infrastructure and equipment	Portable fire extinguishers a) Must be readily accessible, clearly signposted and in good condition. b) Extinguishers must be provided at the Fuel storage tank, Contractors Storage Yard, Office i. Fire fighting foam in 20L drums must be provided at the Contractors Storage Yard c) Must be provided in all plant and equipment and personnel vehicles.	Ongoing	P19_Moxi Fire Extinguisher	No fire extinguisher provided at the fuel storage tank, contractors storage yard or the office. No fire fighting foam on site. Not all plant and equipment had portable fire extinguishers. 9kg fire extinguisher was located on the Moxi (P19).	Non-compliant
1-9	Infrastructure and equipment	Quick response fire unit (vehicle mounted) (Within the prescribed premises boundary) a) Must have a minimum of 1,000 L water with operational pump and 20 m of 19 mm diameter (minimum) hose. b) Must be kept in close proximity to any work areas on the site.	Ongoing	Site inspection 22/09/2025 Site inspection 24/02/2026 Site inspection 16/03/2026	(No quick response fire unit is available on site) The water truck (11,000L) is kept in close proximity to work areas on the site and has a minimum of 20 m of 19 mm diameter hose.	Compliant
1-10	Infrastructure and equipment	Water truck (located Within the prescribed premises boundary) a) Must always be available on the premises for dust suppression or firefighting where required. b) Must be able to carry a minimum of 14,000 L of water. c) Must be fitted with 200 L firefighting foam injection systems with remote control cannon.	Ongoing	P14_Water Truck	The water truck (maximum of 11,000L) with water cannon is available on site for fire fighting or dust suppression. It is not fitted with a 200L firefighting foam injection system with remote control cannon.	Non-compliant
1-11	Infrastructure and equipment	Firebreak a) To be maintained around the boundary of the premises, to a width of 3 metres.	Ongoing	Site inspection 16/03/2026	The 3m firebreak is maintained around the boundary of the premises in accordance with the perimeter fence which is approximately the boundary shown in Figure 3 of the Licence.	Compliant
1-12	Infrastructure and equipment	Wheel cleaning facility a) To be maintained in good condition to effectively remove dirt from the wheels of vehicles exiting the premises.	Ongoing	Site inspection 22/09/2025 Site inspection 24/02/2026	The wheel cleaning facility (rumble strip) is located at the weigh bridge not at the site entrance as shown in Figure 2 of the Licence. Site inspection showed that it was maintained in good condition in the reporting period.	Compliant
1-13	Infrastructure and equipment	Site perimeter fencing a) Must be maintained in good condition, at a minimum of 1.8 m high, to prevent the entry of fauna and feral animals onto the premises. b) Entrance gates to the premises must be securely locked when the premises is unattended to prevent unauthorised access.	Ongoing	Site inspection 22/09/2025 Site inspection 24/02/2026	The site perimeter fencing was in place and maintained for the reporting period. The entrance gates are securely locked when the premises is unattended to prevent unauthorised access.	Compliant

Condition No.	Condition Factor	Condition	Timing	Evidence	Determination	Compliance Finding																
1-14	Infrastructure and equipment	<p>Signage At the site entrance clearly displays the following information:</p> <ul style="list-style-type: none"> <li>a) hours of operation;</li> <li>b) contact phone number for information and complaints or notification of fires;</li> <li>c) a list of materials that are accepted;</li> <li>d) the types of waste that must not be deposited on the premises and a contact telephone number for alternative disposal options; and</li> <li>e) a warning, indicating penalties for people lighting fires.</li> </ul>	Ongoing	<p>P07_Front Gate Sign IMG_0915</p> <p>P23_Weighbridge Sign IMG_0977</p>	<p>The signage at the entrance displays:</p> <ul style="list-style-type: none"> <li>a) the hours of operation</li> <li>b) the contact number for information, complaints or fires</li> </ul> <p>The sign at the weighbridge includes:</p> <ul style="list-style-type: none"> <li>c) a list of materials that are accepted;</li> <li>d) the types of waste that must not be deposited on the premises and a contact telephone number for alternative disposal options; and</li> <li>e) a warning, indicating penalties for people lighting fires.</li> </ul>	Compliant																
1-15	Infrastructure and equipment	<p>Groundwater monitoring wells</p> <ul style="list-style-type: none"> <li>c) Seven (7) groundwater monitoring wells at the landfill site, designated GG1, GG2, GG3, GG4, GG5, GG6, GGN7 maintained in good working order to allow representative samples to be collected.</li> </ul>	Ongoing	<p>Site inspection 22/09/2025</p> <p>Site inspection 24/02/2026</p>	<p>The seven groundwater monitoring wells were maintained in good working order in the reporting period and were monitored February, July and October 2025.</p>	Compliant																
2	Waste Acceptance	<p>The licence holder must only accept onto the premises waste of a type that:</p> <ul style="list-style-type: none"> <li>(a) does not exceed the rate at which that waste is received; and</li> <li>(b) meets the relevant acceptance specification, as set out in Table 2.</li> </ul> <table border="1" data-bbox="454 1045 1127 1304"> <thead> <tr> <th>Waste type</th> <th>Rate at which waste is received</th> <th>Acceptance specification<sup>1</sup></th> </tr> </thead> <tbody> <tr> <td>Clean Fill</td> <td rowspan="6">Combined 150,000 tonnes per annual period.</td> <td>None specified</td> </tr> <tr> <td>Inert Waste Type</td> <td>Ongoing</td> </tr> <tr> <td>Inert Waste Type</td> <td>Plastics only.</td> </tr> <tr> <td>Putrescible</td> <td>None specified.</td> </tr> <tr> <td>Special Waste</td> <td>None specified.</td> </tr> <tr> <td>Contaminated</td> <td>Must meet the Acceptance</td> </tr> </tbody> </table> <p>Note 1: Additional requirements for the acceptance of controlled waste</p>	Waste type	Rate at which waste is received	Acceptance specification <sup>1</sup>	Clean Fill	Combined 150,000 tonnes per annual period.	None specified	Inert Waste Type	Ongoing	Inert Waste Type	Plastics only.	Putrescible	None specified.	Special Waste	None specified.	Contaminated	Must meet the Acceptance	Ongoing	<p>E01_Fernview Weighbridge Data September Quarter 2025</p> <p>E02_Fernview Environmental Weighbridge Report - DEC 31 2025 Quarter</p>	<p>The landfill received 11,769 tonnes waste of the specified types in the reporting period:</p> <ul style="list-style-type: none"> <li>• Inert Waste Type: <ul style="list-style-type: none"> <li>• Mixed C&amp;D Waste</li> <li>• Mixed inert waste</li> </ul> </li> <li>• Putrescible: <ul style="list-style-type: none"> <li>• Mixed putrescible – Other</li> <li>• Mixed putrescible waste – C&amp;I</li> </ul> </li> </ul>	
Waste type	Rate at which waste is received	Acceptance specification <sup>1</sup>																				
Clean Fill	Combined 150,000 tonnes per annual period.	None specified																				
Inert Waste Type		Ongoing																				
Inert Waste Type		Plastics only.																				
Putrescible		None specified.																				
Special Waste		None specified.																				
Contaminated		Must meet the Acceptance																				
3	Waste Acceptance	<p>The licence holder must ensure that where waste does not meet the waste acceptance criteria set out in condition 2, it is removed from the premises by the delivery vehicle or, where that is not possible, stored in a quarantine storage area or container and removed to an appropriately authorised facility within 14 days of receipt.</p>	Ongoing	<p>Site inspection 22/09/2025</p> <p>Site inspection 24/02/2026</p>	<p>Where individual tyres have been quarantined from loads of waste accepted at the facility they have been quarantined in a location away from the landfill for later disposal.</p>	Compliant																
	Operational controls - Waste processing	<p>The licence holder must ensure that the waste types specified in <b>Table 3</b> are only subjected to the corresponding processes, subject to the corresponding process limits and/or specifications.</p>																				
4-1	Operational controls - Waste processing	<p>Soft wastes accepted for landfilling</p> <p>Disposal of first layer of waste by landfilling</p> <ul style="list-style-type: none"> <li>a) All solid waste materials delivered to the premises must be contained in a covered vehicle and only unloaded within the active cell and within the vicinity of the tipping face.</li> <li>b) Landfilling must only occur in Landfill Cell 1 as depicted in Figure 1.</li> </ul>	Ongoing	<p>Site inspection 22/09/2025</p> <p>P09_Covered Vehicle IMG_0022</p> <p>P10_Covered Vehicle IMG_0931</p> <p>P06_Waste Placement IMG_0054</p> <p>P12_Vehicle Tipping IMG_0953</p>	<p>Inspection of the landfill confirmed that:</p> <ul style="list-style-type: none"> <li>a) Solid waste materials were being delivered to the premises by covered vehicles (P09, P10) and being unloaded within the active cell within the vicinity of the tipping face (P06, P12).</li> </ul>																	

Condition No.	Condition Factor	Condition	Timing	Evidence	Determination	Compliance Finding	
		<ul style="list-style-type: none"> <li>c) Prior to any placement of waste, a new layer of non-woven and needle punched separation geotextile is to be progressively installed over, and in contact with, the Landfill Cell 1 leachate aggregate layer in accordance with Figure 8.</li> <li>d) The tipping area must be maintained no wider than 30 metres and no higher than two (2) metres in vertical height;</li> <li>e) Only landfilling of soft waste is to occur.</li> <li>f) Waste must be placed as a full 2 m layer in one lift.</li> </ul>		P13_2m Layer IMG_0059	<ul style="list-style-type: none"> <li>b) Landfilling has only occurred in Cell 1 in the reporting period</li> <li>c) A new layer of non-woven and needle punched separation geotextile was progressively installed over, and in contact with, the Landfill Cell 1 leachate aggregate layer</li> <li>d) The tipping area was maintained no wider than 30m and no higher than 2 m in vertical height.</li> <li>e) Soft waste only was disposed in the reporting period as per the definition in Table 15 of the licence. It included municipal, commercial, industrial and other waste that had a low chance of containing large sharp items that could puncture the landfill liner (soft waste only).</li> <li>f) Waste is being placed as a full 2m layer in one lift (P13).</li> </ul>		
4-2	Operational controls - Waste processing	<p>All waste types accepted for landfilling</p> <p>Acceptance and disposal of waste by landfilling (subsequent layers)</p> <ul style="list-style-type: none"> <li>a) All solid waste materials delivered to the premises must be contained in a covered vehicle and only unloaded within the active cell and within the vicinity of the tipping face.</li> <li>b) The licence holder must manage the landfilling activities within the active Class II putrescible landfill by: <ul style="list-style-type: none"> <li>i. only disposing of waste by landfilling within a defined tipping area in Landfill Cell 1;</li> <li>ii. ensuring that temporary batters within the waste materials do not exceed slopes of 1V:3H;</li> <li>iii. ensuring that at every 10 m in vertical height of waste placement, the next lift is set back 5 m to create a bench;</li> <li>iv. ensuring that no waste is temporarily stored or landfilled within 35 m from the boundary of the premises;</li> <li>v. ensuring that highly odourous waste is disposed of by burial immediately following acceptance;</li> <li>vi. ensuring earthen bunding and surface grading are maintained to direct stormwater away from the tipping area;</li> <li>vii. maintaining the tipping area no wider than 30 metres and no higher than two (2) metres in vertical height;</li> <li>viii. compacting waste layers to not more than 500 mm thick as soon as is practicable after placement of waste, and not later than at the end of each working day;</li> <li>ix. covering the waste in accordance with the requirements of condition 5;</li> </ul> </li> </ul>	Ongoing		Not applicable	Only the Disposal of first layer of waste by landfilling in the reporting period.	Not applicable

Condition No.	Condition Factor	Condition	Timing	Evidence	Determination	Compliance Finding																						
		<ul style="list-style-type: none"> <li>x. ensuring that daily cover and intermediate cover is removed prior to recommencing landfilling;</li> <li>xi. stockpiling sufficient cover material to allow waste to be covered in accordance with condition 5 and to cover exposed combustible waste in the event of a fire.</li> </ul>																										
4-3	Operational controls - Waste processing	<p>Special Waste Type 2</p> <p>Acceptance and disposal of waste by landfilling (subsequent layers)</p> <ul style="list-style-type: none"> <li>a) The licence holder or their representative, must complete and sign the original controlled waste tracking form, noting, in writing, any discrepancies between waste declared and waste received.</li> <li>b) The licence holder must keep a record of the controlled waste tracking form for at least three years.</li> <li>c) The licence holder must restrict access to the landfill site where the waste is buried to authorised personnel only.</li> </ul>	Ongoing	Not applicable	No disposal of Special Waste Type 2 in the reporting period.	Not applicable																						
4-4	Operational controls - Waste processing	<p>Inert Waste Type 1</p> <p>Receipt, handling and storage prior to disposal</p> <ul style="list-style-type: none"> <li>a) Crushing and screening of waste is not permitted.</li> </ul>	Ongoing	<p>Site inspection 22/09/2025</p> <p>Site inspection 24/02/2026</p>	No crushing or screening of waste is undertaken on site.	Compliant																						
5	Operational controls - Waste processing	<p>The licence holder must ensure that cover is applied and maintained on landfilled waste types in accordance with the corresponding cover requirements in <b>Table 4</b> and that sufficient stockpiles of cover are maintained on the premises at all times to meet the requirements of this condition.</p> <table border="1"> <thead> <tr> <th>Waste Type</th> <th>Material</th> <th>Depth/specifications</th> <th>Timescales</th> </tr> </thead> <tbody> <tr> <td>Clean fill</td> <td colspan="3">No cover required</td> </tr> <tr> <td>Inert Waste Type 1</td> <td colspan="3"></td> </tr> <tr> <td rowspan="2">Putrescible waste Contaminated solid waste</td> <td rowspan="2">Inert Waste Type 1, clean fill or soil</td> <td>150 mm</td> <td>As soon as practicable and not later than the end of the working day that the waste was deposited.</td> </tr> <tr> <td>300 mm and graded at a minimum slope of 2% away from the landfill active face.</td> <td>As soon as practicable where surfaces will be exposed for 90 days or more</td> </tr> <tr> <td>Inert Waste Type 2</td> <td>Inert Waste Type 1, clean fill or soil</td> <td>300 mm</td> <td>As soon as practicable after acceptance and no later than the end of the working day that the waste was accepted</td> </tr> </tbody> </table>	Waste Type	Material	Depth/specifications	Timescales	Clean fill	No cover required			Inert Waste Type 1				Putrescible waste Contaminated solid waste	Inert Waste Type 1, clean fill or soil	150 mm	As soon as practicable and not later than the end of the working day that the waste was deposited.	300 mm and graded at a minimum slope of 2% away from the landfill active face.	As soon as practicable where surfaces will be exposed for 90 days or more	Inert Waste Type 2	Inert Waste Type 1, clean fill or soil	300 mm	As soon as practicable after acceptance and no later than the end of the working day that the waste was accepted	Ongoing	<p>P02_Cover Stockpile IMG_0925</p> <p>P03_Landfill with Cover IMG_0932</p> <p>P04_Partial Cover Landfill IMG_0924</p>	<p>Sufficient stockpiles of cover are being maintained on the premises (P02).</p> <p>Cover is being applied and maintained on a daily basis.</p>	Compliant
Waste Type	Material	Depth/specifications	Timescales																									
Clean fill	No cover required																											
Inert Waste Type 1																												
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Inert Waste Type 2	Inert Waste Type 1, clean fill or soil	300 mm	As soon as practicable after acceptance and no later than the end of the working day that the waste was accepted																									
6	Emissions and discharges - Fire management	<p>The licence holder must notify the CEO of the following as soon as practicable, but no later than 7 days after the event of:</p> <ul style="list-style-type: none"> <li>(a) any fire on the premises; and/or</li> <li>(b) any accident, malfunction, or emergency which results or could result in the discharge of firefighting wash-water or other wastes from the premises.</li> </ul>	Within 7 days post-event	Not applicable	There were no fires on the premises in the reporting period, no discharges of firefighting wash-water or other wastes from the premises in the reporting period and no accidents, malfunctions, or emergencies which could have resulted in the discharge of firefighting wash-water or other wastes from the premises in the reporting period.	Not applicable																						
7	Emissions and discharges - Fire management	<p>The licence holder must ensure that:</p> <ul style="list-style-type: none"> <li>(a) firefighting equipment and systems are in good working order and capable of controlling and extinguishing a waste material fire within the premises;</li> <li>(b) any unauthorised fire on the premises is extinguished as soon as possible;</li> </ul>	Ongoing	Not applicable	<p>The fire truck that is on site is in good working order. Refer to 1-8, 1-9 and 1-10 for the upgrades to the firefighting equipment and systems that are required).</p> <p>There were no fires on the premises in the reporting period.</p>	Non-compliant																						

Condition No.	Condition Factor	Condition	Timing	Evidence	Determination	Compliance Finding
		<p>(c) all accumulated and recoverable fire wash-water and other waste that may result from firefighting on the premises is collected and removed within 24- hours of a fire event;</p> <p>(d) any firefighting wash-water is removed without delay by a carrier licensed under the Environmental Protection (Controlled Waste) Regulations 2004 or placed into the onsite leachate pond; and</p> <p>(e) all fire impacted waste is disposed of into Landfill Cell 1.</p>				
8	Emissions and discharges - Dust emissions	The licence holder must ensure that no visible dust crosses the premises boundary	Ongoing	<p>Site inspection 22/09/2025</p> <p>Site inspection 24/02/2026</p> <p>P14_Water Truck</p> <p>P01_Complaints Register</p> <p>IMG_0963</p>	The licence holder monitors dust on a daily basis and implements dust suppression utilising the water truck (P14) where required to ensure that no visible dust crosses the premises boundary. There has been no dust complaint in the reporting period.	Compliant
9	Emissions and discharges - Dust emissions	The licence holder must restrict vehicle speeds to less than 30 km/hr on the premises.	Ongoing	P05_Speed Signage IMG_0916	A speed limit of 20 km/hr speed restriction on site is posted at the front gate for all vehicles entering the facility to adhere to. The daily inspection checklist includes a reminder to check vehicle speeds operating on site.	Compliant
10	Emissions and discharges - Dust emissions	<p>The licence holder must manage fugitive dust emissions from the active tipping area during operational hours by:</p> <p>(a) applying water;</p> <p>(b) ensuring waste is levelled and compacted as soon as practicable after it is discharged and at a minimum at the end of the working day; and</p> <p>(c) ensuring waste is placed and compacted to ensure all faces are stable and capable of retaining further waste placement or placement of cover or rehabilitation material.</p>	Ongoing	<p>P14_Water Truck</p> <p>P04_Partial Cover Landfill</p> <p>IMG_0924</p> <p>P15_Compactor IMG_0934</p> <p>P06_Waste Placement IMG_0054</p>	<p>The water truck is stationed in the landfill (P04) ready to apply water to manage dust emissions at the active tipping face.</p> <p>The bulldozer and compactor operate during the day to compact waste after it is tipped each day prior to the end of the day (P04, P15).</p> <p>Waste has been placed during the reporting period in a single layer over the base of the liner (P06).</p>	Compliant
11	Emissions and discharges - Dust emissions	All operational vehicles must pass through the wheel cleaning facility prior to exiting the premises.	Ongoing	<p>Site inspection 22/09/2025</p> <p>Site inspection 24/02/2026</p>	All vehicles leaving the facility drive over the wheel cleaning rumble strip on exit.	Compliant
12	Emissions and discharges - Discharges to land and water	The licence holder must immediately recover, or remove and dispose of, spills of environmentally hazardous materials including fuel, oil, or other hydrocarbons, whether inside or outside an engineered containment system.	Ongoing	Not applicable	There were no, spills of environmentally hazardous materials including fuel, oil, or other hydrocarbons in the reporting period.	Not applicable
13	Emissions and discharges - Discharges to land and water	The licence holder must ensure that all material used for the recovery, removal, and/or disposal of environmentally hazardous materials is stored in an impermeable container prior to disposal to a suitably licensed premises.	Ongoing	Refer to Condition 12	Refer to Condition 12	Not applicable
14	Emissions and discharges - Windblown waste	The licence holder must ensure that windblown waste is contained within the boundary of the premises and that windblown waste is returned to the tipping area on at least a weekly basis.	Ongoing	<p>Site inspection 22/09/2025</p> <p>Site inspection 24/02/2026</p>	The licence holder inspects the property on a weekly basis to ensure that no windblown waste leaves the boundary of the premises. No windblown waste was observed beyond the premises boundary during site inspection.	Compliant
15	Emissions and discharges - Windblown waste	The licence holder must operate and maintain a minimum of six (6) portable litter control screens with a minimum height of 4 m and minimum length of 5 m, located within 15 m downwind of the working face of the landfill.	Ongoing	<p>Site inspection 22/09/2025</p> <p>Site inspection 24/02/2026</p>	No litter control screens are being utilised within 15 m downwind of the working face of the landfill. Failure to use the screens in the current operation of the landfill is not creating a windblown waste issue. DWER visited the site on 04/12/2025 and did not raise any issues in regard to the landfill not employing the litter control screens.	Not applicable

Condition No.	Condition Factor	Condition	Timing	Evidence	Determination	Compliance Finding
16	Emissions and discharges - Odour	The licence holder must ensure that odour emitted from the premises does not unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person who is not on the premises.	Ongoing	Site inspection 22/09/2025 Site inspection 24/02/2026	The premises is generally not accepting putrescible waste, and the odour is very low. There have been no complaints received associated with odour.	Compliant
17	Emissions and discharges - Odour	The licence holder shall prepare, maintain and implement an Odour Management Plan for the premises that sets out:  (a) the identification of odour sources within the premises; (b) how odour emissions will be mitigated from the identified sources; (c) the identification of procedures to support the mitigation of odour emissions; (d) details of engineered controls to support the mitigation of odour emissions; (e) site inspections to be undertaken to identify unreasonable sources of odour; and (f) measures to be undertaken if unreasonable odour emissions are detected outside of the prescribed premises boundary.	Ongoing	Not applicable	The Odour Management Plan has not been prepared or submitted to the CEO.	Non-compliant
18	Emissions and discharges - Odour	The licence holder must submit to the CEO the Odour Management Plan prepared pursuant to condition 17 by 30 June 2025.	30 June 2025	Not applicable	The Odour Management Plan has not been prepared or submitted to the CEO.	Non-compliant
19	Emissions and discharges - Noise	All vehicles entering the premises and within the licence holder's control must be fitted with broadband reversing alarms.	Ongoing	Site inspection 22/09/2025 Site inspection 24/02/2026	All machinery operating in the Cell were fitted with broadband reversing alarms.	Compliant
20	Emissions and discharges - Noise	The licence holder must ensure that waste is not accepted at the premises outside of the hours of 7:00 to 17:00 Monday to Friday, and 7:00 to 16:00 on Saturdays and Public Holidays.	Ongoing	P07_Front Gate Sign IMG_0915	The sign on the front gate specifies that the operating hours are: <ul style="list-style-type: none"><li>Monday to Friday 7:00 to 16:00; and</li><li>Saturdays 7:00 to 12:00.</li></ul>	Compliant
21	Emissions and discharges - Vermin/pests	The licence holder must implement the following feral animal, vermin and weed management measures:  (a) check and record the integrity of the premises boundary fence on a weekly basis and undertake repairs within 1 week of any damage being identified; (b) undertake vermin prevention measures including baiting and trapping; and (c) inspect the premises monthly for the presence of weeds, record visible observations of the inspections and take and record measures to prevent the spread and growth of weeds.	Ongoing	Site inspection 24/02/2026	The premises boundary fence is driven every Monday morning. No damage has been detected in the reporting period requiring repairs to the fence. The Feral and Pest Animal Management Plan was under review in the reporting period and has not been implemented, as such no vermin prevention measures have been implemented. No records were made of inspections for weeds or measures taken to prevent the spread and growth of weeds.	Non-compliant
22-1	Specified actions – Capping Plan	Capping Plan  The licence holder must prepare and submit a Capping Plan for Landfill Cell 1 to the CEO which includes details on:  a) the design; b) material specifications; c) landfill gas collection; d) current and finished survey levels; and e) construction quality assurance planning.	3 months prior to completion of waste disposal in Landfill Cell 1	Not applicable	The landfill is more than 3 months from completion of waste disposal (when the Capping Plan is required to be submitted).	Not applicable
22-2	Specified actions – Landfill Gas Management Plan	Landfill Gas Management Plan  The licence holder shall prepare and submit to the CEO a Landfill Gas Management Plan which includes:	30 November 2026	Not applicable	The Landfill Gas Management Plan is not required to be submitted until 20/11/2026.	Not applicable

Condition No.	Condition Factor	Condition	Timing	Evidence	Determination	Compliance Finding						
		a) a detailed description and drawings/layout plans of the proposed active landfill gas extraction and management system; b) installation procedures; c) installation timeline; d) monitoring procedures; and e) maintenance procedures.										
23	Monitoring - General monitoring	The licence holder shall ensure that: (a) All liquid samples are collected and preserved in accordance with AS/NZS 5667.1; (b) All surface water sampling is conducted in accordance with AS/NZS 5667.4; (c) All groundwater sampling is conducted in accordance with AS/NZS 5667.11; (d) All laboratory samples are submitted to and tested by a laboratory with NATA accreditation for the parameters being measured unless indicated otherwise within the relevant table.	Ongoing	R03_JBS&G Annual Monitoring Report	The annual monitoring report describes how groundwater sampling was conducted in accordance with AS/NZS 5667.11. Condition 36 confirms that all samples were submitted to a NATA accredited laboratory.	Compliant						
24	Monitoring - General monitoring	The licence holder must ensure that all monitoring equipment used on the premises to comply with the conditions of this licence is maintained and calibrated in accordance with the manufacturer's specifications.	Ongoing	R03_JBS&G Annual Monitoring Report	The annual monitoring report describes how groundwater monitoring equipment was maintained and calibrated in accordance with the manufacturer's specifications.	Compliant						
25	Monitoring - General monitoring	The licence holder must, where the requirements of calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.	Ongoing	Not applicable	Not applicable	Not applicable						
26	Monitoring - General monitoring	The licence holder must ensure that: (a) monthly monitoring is undertaken at least 15 days apart; (b) quarterly monitoring is undertaken at least 2 months apart; and (c) annual monitoring is undertaken at least 9 months apart.	Ongoing	R03_JBS&G Annual Monitoring Report	Quarterly monitoring was undertaken at least 2 months apart.	Compliant						
27	Monitoring - Input and output monitoring	The licence holder must record the total amount of waste accepted onto the premises, for each waste type listed in <b>Table 6</b> , in the corresponding unit, and for each corresponding time period, as set out in <b>Table 6</b> . <table border="1" data-bbox="457 1304 1026 1434"> <thead> <tr> <th>Waste Type</th> <th>Units</th> <th>Time Period</th> </tr> </thead> <tbody> <tr> <td>Waste accepted in accordance with Table 2</td> <td>Tonnes</td> <td>Each load arriving at the premises</td> </tr> </tbody> </table>	Waste Type	Units	Time Period	Waste accepted in accordance with Table 2	Tonnes	Each load arriving at the premises	Ongoing	E01_Fernview Weighbridge Data September Quarter 2025 E02_Fernview Environmental Weighbridge Report - DEC 31 2025 Quarter P11_Cooee Reporting IMG_0962	The Cooee Software package records the weighbridge records (tonnes) for each load arriving at the premises and provides output reports of the data for the reporting period (E02, E03).	Compliant
Waste Type	Units	Time Period										
Waste accepted in accordance with Table 2	Tonnes	Each load arriving at the premises										
28	Monitoring - Input and output monitoring	The licence holder must record the total amount of waste removed from the premises, for each waste type listed in <b>Table 7</b> , in the corresponding unit, and for each corresponding time period set out in <b>Table 7</b> . <table border="1" data-bbox="457 1562 1285 1652"> <thead> <tr> <th>Waste Type</th> <th>Units</th> <th>Time Period</th> </tr> </thead> <tbody> <tr> <td>Waste type as defined in the Landfill Definitions</td> <td>Tonnes</td> <td>Each load rejected or removed from the premises</td> </tr> </tbody> </table>	Waste Type	Units	Time Period	Waste type as defined in the Landfill Definitions	Tonnes	Each load rejected or removed from the premises	Ongoing	Site inspection 24/02/2026	No waste was removed from the premises in the reporting period.	Not applicable
Waste Type	Units	Time Period										
Waste type as defined in the Landfill Definitions	Tonnes	Each load rejected or removed from the premises										
	Stormwater management monitoring	The licence holder must monitor and record, at a minimum, the parameters specified in <b>Table 8</b> at the frequency specified in <b>Table 8</b> and record any management actions undertaken to ensure compliance with condition 1.										

Condition No.	Condition Factor	Condition	Timing	Evidence	Determination	Compliance Finding
29-1	Stormwater management monitoring	Check for the presence of erosion around Landfill Cell 1 and stormwater management structures Observation of site conditions and signs and location of erosion	Weekly/following rainfall	P20_Erosion P21_Erosion P22_Erosion Remediation IMG_9981	The licence holder checked the landfill for the presence of erosion around landfill Cell 1 and Stormwater Management Structures in the reporting period. Amelioration of erosion (P20, P21) was undertaken with wood mulch (P22).	Compliant
29-2	Stormwater management monitoring	Check vegetation for signs of deterioration due to surface water flow paths Observation of vegetation condition	Weekly/following rainfall	Site inspection 22/09/2025 Site inspection 24/02/2026	The licence holder did not observe signs of vegetation deterioration due to surface water flow paths in the reporting period. No written records were kept of observations being made.	Compliant
29-3	Stormwater management monitoring	Monitor water levels within the stormwater pond Water levels in the stormwater pond (m AHD)	Monthly	Site inspection 22/09/2025 Site inspection 24/02/2026	The licence holder reported that monitoring in the reporting period showed that rainfall immediately infiltrated as it fell and no rainwater accumulated in the stormwater pond.	Compliant
	Leachate Management System monitoring	The licence holder must inspect and monitor the leachate management system to monitor leachate levels in all ponds and sumps and manage movement of leachate between sumps and ponds and the recirculation system. The licence holder must monitor and record, at a minimum, the parameters specified in <b>Table 9</b> at the locations, levels and recording frequency specified in <b>Table 9</b> .				
30-1	Leachate Management System monitoring	Base of monitoring point (m AHD) Level base of leachate sumps and base formation of the landfill To be conducted prior to the operation of the landfill	Once prior to operation of landfill	Site inspection 16/03/2026	The base of the of leachate sump and base formation of the landfill have not been measured prior to the operation of the landfill.	Non-compliant
30-2	Leachate Management System monitoring	Depth of freeboard (mm) Leachate Pond	Weekly	Not applicable	No leachate has been produced in the reporting period.	Not applicable
30-3	Leachate Management System monitoring	Depth of leachate (m AHD) Landfill Cell 1 leachate detection layer at the base of the landfill To be conducted when leachate levels are representative of those within the landfill and not during leachate pumping	Weekly	Not applicable	No leachate has been produced during the reporting period and there are no leachate levels detected in Landfill Cell 1 riser and sump.	Not applicable
30-4	Leachate Management System monitoring	Landfill Cell 1 riser and sump To be conducted when leachate levels are representative of those within the landfill and not during leachate pumping	Weekly	Not applicable	No leachate has been produced during the reporting period, and no leachate levels have been detected in the Landfill Cell 1 riser and sump.	Not applicable
30-5	Leachate Management System monitoring	Volume of leachate (m3) Pumped out of Landfill Cell 1 sump	Weekly	Not applicable	No leachate has been produced during the reporting period, and no leachate has been pumped out of Landfill Cell 1.	Not applicable
30-6	Leachate Management System monitoring	Volume of leachate (m3) Extracted from the leachate detection layer of Landfill Cell 1	Weekly	Not applicable	No leachate has been produced during the reporting period, and no leachate has been extracted from the leachate detection layer of Landfill Cell 1.	Not applicable

Condition No.	Condition Factor	Condition	Timing	Evidence	Determination	Compliance Finding									
30-7	Leachate Management System monitoring	Volume of leachate added to Landfill Cell 1 (m3) Recirculated from Leachate Pond	weekly	Not applicable	No leachate has been produced during the reporting period, and no leachate has been recirculated from the Leachate Pond and added to Landfill Cell 1.	Not applicable									
30-8	Leachate Management System monitoring	Volume of leachate added to Landfill Cell 1 (m3) Recirculated from Landfill Cell 1 sump	weekly	Not applicable	No leachate has been produced during the reporting period, and no leachate has been recirculated from Landfill Cell 1 sump and added to Landfill Cell 1.	Not Applicable									
30-8	Leachate Management System monitoring	Volume of leachate removed offsite (m3) Pumped out of leachate pond or extracted from the leachate detection layer of Landfill Cell 1 Any leachate extracted that cannot be used for recirculation is to be tankered offsite.	Each time leachate is removed offsite	Not applicable	No leachate has been produced during the reporting period, and no leachate has been removed offsite.	Not Applicable									
31-1	Leachate Management System monitoring	The licence holder must maintain the Table 10 leachate operational level (Leachate head in Landfill Cell 1) at the Base of Landfill Cell 1 liner to a Level of less than or equivalent to 300 mm.	Monthly averaging period.	Not applicable	No leachate was produced during the reporting period, as such the operational level in Table 10 was less than 300 mm.	Not Applicable									
31-2	Leachate Management System monitoring	The licence holder must maintain the Table 10 leachate operational level (Freeboard) in the Leachate pond to greater than or equal to 1000 mm.	Instantaneous	Not applicable	No leachate was produced during the reporting period, as such the operational level in Table 10 was greater than 1000 mm.	Not Applicable									
32	Monitoring - Leachate Management System monitoring	In case of an occurrence of a Reportable Event at a corresponding reference point as specified in <b>Table 11</b> , the licence holder must take the relevant management action as specified in <b>Table 11</b> . <table border="1" data-bbox="457 1192 1026 1591"> <thead> <tr> <th>Location</th> <th>Event</th> <th>Management action</th> </tr> </thead> <tbody> <tr> <td>Base of Landfill Cell 1 liner</td> <td>Any time the leachate head exceeds the operational level in Table 10 for a duration of longer than 24 hours.</td> <td>(a) The licence holder must investigate the cause of the exceedance within 24- hours. (b) Where the investigation identifies failure or blockage of the leachate management system, the licence holder must remove leachate from the system via a licensed liquid waste transport carrier to a licensed liquid waste facility within 48-hours of observing the exceedance.</td> </tr> <tr> <td>Leachate pond</td> <td>Any time the freeboard is less than the operational level in Table 10 for a duration of longer than 24-hours.</td> <td>(c) The licence holder must report the exceedance and results of the investigation including proposed resolution to the CEO within 7 days.</td> </tr> </tbody> </table>	Location	Event	Management action	Base of Landfill Cell 1 liner	Any time the leachate head exceeds the operational level in Table 10 for a duration of longer than 24 hours.	(a) The licence holder must investigate the cause of the exceedance within 24- hours. (b) Where the investigation identifies failure or blockage of the leachate management system, the licence holder must remove leachate from the system via a licensed liquid waste transport carrier to a licensed liquid waste facility within 48-hours of observing the exceedance.	Leachate pond	Any time the freeboard is less than the operational level in Table 10 for a duration of longer than 24-hours.	(c) The licence holder must report the exceedance and results of the investigation including proposed resolution to the CEO within 7 days.	Ongoing	Refer to Condition 31-1 and Condition 31-2	The operational level in Table 10 was not breached in the reporting period.	Not applicable
Location	Event	Management action													
Base of Landfill Cell 1 liner	Any time the leachate head exceeds the operational level in Table 10 for a duration of longer than 24 hours.	(a) The licence holder must investigate the cause of the exceedance within 24- hours. (b) Where the investigation identifies failure or blockage of the leachate management system, the licence holder must remove leachate from the system via a licensed liquid waste transport carrier to a licensed liquid waste facility within 48-hours of observing the exceedance.													
Leachate pond	Any time the freeboard is less than the operational level in Table 10 for a duration of longer than 24-hours.	(c) The licence holder must report the exceedance and results of the investigation including proposed resolution to the CEO within 7 days.													
33	Monitoring - Leachate quality monitoring	The licence holder must undertake the process monitoring at the monitoring point reference locations specified in <b>Table 12</b> according to the corresponding specifications.	Ongoing	Not applicable	No leachate was produced on site in the reporting period and as such no sampling was able to be undertaken.	Not applicable									

Condition No.	Condition Factor	Condition	Timing	Evidence	Determination	Compliance Finding
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Monitoring location	Parameter	Units	Frequency	Method	
Leachate Pond	Visual appearance: colour, turbidity, free phase hydrocarbons and foaming	N/A	quarterly	N/A	
Landfill Cell 1 riser and sumps Landfill Cell 1 Leachate detection layer Leachate Pond	pH <sup>1</sup>	pH units	quarterly	Spot sample in accordance with Condition 23	
	Electrical conductivity <sup>1</sup>	µS/cm			
	Total soluble solids	mg/L			
	Cations and anions – Potassium, chloride and sulfate		µg/L	quarterly	Spot sample in accordance with Condition 23
	Total metals – arsenic (total) cadmium, chromium, copper, iron (total), lead manganese, mercury, molybdenum, nickel, selenium, zinc				
	Nutrients – Ammoniacal nitrogen, nitrate-nitrogen, total nitrogen, total phosphorus, total organic carbon, chemical oxygen demand				
	Total recoverable hydrocarbons Monocyclic aromatic hydrocarbons – benzene, toluene, methylbenzene, xylene (total) Polycyclic aromatic hydrocarbons – acenaphthene, anthracene, ben(a)pyrene, fluoranthene, naphthalene, pyrene Organochlorine pesticides – Aldrin, chlordane (and metabolites), DDT (and metabolites), dieldrin, chlorpyrifos, HCB, heptachlor (and its epoxide), lindane Organophosphates – parathion, demeton-S-methyl, maldison, diazinon, dimethoate, fenamiphos, fenthion Other – atrazine, TCE, PCE and polychlorinated biphenyls (total)				

34

The licence holder must monitor groundwater quality in accordance with Table 13.

Ongoing

Monitoring - Groundwater and surface water monitoring

Monitoring location	Parameter	Unit	Frequency	Averaging period
Monitoring wells as shown in Figure 9, Schedule 1 Stormwater pond (when flowing) as shown in Figure 4, Schedule 1	Standing water level <sup>1</sup>	m(AHD)	Quarterly	Spot sample, in accordance with condition 23
	pH <sup>1</sup>	pH unit		
	Electrical conductivity <sup>1</sup>	µS/cm		
	Redox potential <sup>1</sup>	Eh		
	Chemical oxygen demand	mg/L		
	Nitrate-nitrogen			
	Ammonia-nitrogen			
	Total nitrogen			
	Total phosphorus			
	Total dissolved solids			
	Total organic carbon			
	Dissolved oxygen <sup>1</sup>			
	Major cations and anions: calcium,			
	Heavy Metals: Aluminium, Arsenic,			
	Organics: Phenols, Polyaromatic hydrocarbons (PAH), Organochlorine pesticides, Organophosphate pesticides (Demeton-S-Methyl, Diazinon, Dimethoate, Fenamiphos, Fenthion, Malathion and Parathion), Polychlorinated biphenyls (PCB), Atrazine, BTEX (benzene, toluene, ethylbenzene, xylenes), Total Petroleum Hydrocarbons and Trichloroethylene/ Perchloroethylene	mg/L		

Note 1: In-field non-NATA accredited analysis permitted

R02\_Stass GW Report

R03\_JBS&G Annual Groundwater Report

Groundwater monitoring was conducted at seven monitoring bores across the site from 01/10/2020 through to 16/02/2024 (R02). Advice from Stass Environmental was that this was a comprehensive baseline and that sampling frequency should reduce to six monthly until commencement of operations. A monitoring event was undertaken 28/02/2025 and 30/07/2025. Operations commenced 16/09/2025. Quarterly monitoring was undertaken in October 2025. The results of the monitoring are reported in the annual monitoring report (R03). The stormwater pond was not flowing in the reporting period (no samples were taken).

Compliant

Condition No.	Condition Factor	Condition	Timing	Evidence	Determination	Compliance Finding
35	Monitoring - Groundwater and surface water monitoring	<p>Note 1: In-field non-NATA accredited analysis permitted</p> <p>The licence holder must adhere to the following field quality assurance and quality control procedures, as specified in Schedule B2 of the Assessment of Site Contamination NEPM, and must include as a minimum:</p> <ul style="list-style-type: none"> <li>(a) decontamination procedures for the cleaning of tools and sampling equipment before sampling and between samples;</li> <li>(b) field instrument calibration for instruments used on site;</li> <li>(c) blind replicate samples and rinsate blanks must be collected in the field and sent to the primary laboratory to determine the precision of the field sampling and laboratory analytical program;</li> <li>(d) completed field monitoring sheets / sampling logs for each sample collected, showing: <ul style="list-style-type: none"> <li>i. time of collection;</li> <li>ii. location of collection;</li> <li>iii. initials of sampler;</li> <li>iv. sampling method;</li> <li>v. field analysis results for electrical conductivity, dissolved oxygen, temperature, redox potential and pH;</li> <li>vi. duplicate type / location (if relevant); and</li> <li>vii. site observations and weather conditions, and</li> </ul> </li> <li>(e) chain-of-custody documentation must be completed which details the following information: <ul style="list-style-type: none"> <li>i. site identification;</li> <li>ii. the sampler;</li> <li>iii. nature of the sample;</li> <li>iv. collection time and date;</li> <li>v. analyses to be performed;</li> <li>vi. sample preservation method;</li> <li>vii. departure time from site;</li> <li>viii. dispatch courier(s); and</li> <li>ix. arrival time at the laboratory.</li> </ul> </li> </ul>	Ongoing	<p>E05_Stass Env Standard Operating Procedure - groundwater</p> <p>E06_1193243_COC</p> <p>E07_1250293_COC</p> <p>E08_Field February 2025 Fernview</p> <p>E09_Field July 2025 Fernview</p> <p>R03_JBS&amp;G Annual Groundwater Report</p>	<p>Stass Environmental undertook the monitoring 28/02/2025 and 30/07/2025 in accordance with the Stass Monitoring Procedure (E03) which outlines the decontamination procedures and instrument calibration. The chain of custodies (E06, E07) contains the required details (except sample collection time and departure time from site) and has a duplicate and rinsate blank.</p> <p>The field monitoring sheets for 28/02/2025 and 30/07/2025 have a location for the time of collection but it is left blank, the form does not contain the initials of the Sampler (however all samples are taken by Andre), the form does not note the location of the duplicate (GG6 / GG3) and does not document weather conditions.</p> <p>JBS&amp;G undertook the monitoring October 2025 in accordance with JBS&amp;G groundwater well sampling procedure (R03 4.1.1). The chain of custodies (R03) contains the required details (except sample collection time and departure time from site) with one of the 3 sample days includes the required duplicate and rinsate blank.</p> <p>The field monitoring sheets contain the required information (R03).</p>	Compliant
36	Monitoring - Groundwater and surface water monitoring	<p>All sample analysis must be undertaken by laboratories with current accreditation from the National Association of Testing Authorities (NATA) for the relevant parameters, unless otherwise specified in <b>Table 13</b>.</p>	Ongoing	<p>E03_February 2025 GW Sample Results</p> <p>E04_July 2025 GW Sample Results</p> <p>R03_JBS&amp;G Annual Groundwater Report</p>	<p>Water quality analysis undertaken in February, July and October 2025 was by ARL NATA accredited laboratory.</p>	Compliant
37	Records and reporting - Waste acceptance reporting	<p>The licence holder must:</p> <ul style="list-style-type: none"> <li>(a) maintain a waste acceptance register which ensures that a record is made of: <ul style="list-style-type: none"> <li>i. the time and date of each waste delivery;</li> <li>ii. the name and licence number of the carrier;</li> <li>iii. the weight of the waste;</li> <li>iv. a detailed description of the type of waste;</li> <li>v. the determination of the waste type as defined in condition 2;</li> <li>vi. all supporting documentation related to waste acceptance and classification;</li> <li>vii. any loads of waste rejected from the premises; and</li> <li>viii. the amount of landfill levy payable in respect of the waste.</li> </ul> </li> <li>(b) Maintain a register of Special Waste Type 2 disposed of at the premises which must include: <ul style="list-style-type: none"> <li>i. a plan showing the position of Special Waste Type 2 disposed of at the premises;</li> <li>ii. the date of the deposit</li> </ul> </li> </ul>	Ongoing	<p>E01_Fernview Weighbridge Data September Quarter 2025</p> <p>E02_Fernview Environmental Weighbridge Report - DEC 31 2025 Quarter</p>	<p>The Cooee waste database records for each delivery:</p> <ul style="list-style-type: none"> <li>• the time and date;</li> <li>• the name and licence number of the carrier;</li> <li>• the weight of the waste;</li> <li>• a detailed description of the type of waste;</li> <li>• the determination of the waste type as defined in condition 2;</li> <li>• all supporting documentation related to waste acceptance and classification;</li> <li>• any loads of waste rejected from the premises; and</li> <li>• the amount of landfill levy payable in respect of the waste.</li> </ul>	Compliant

Condition No.	Condition Factor	Condition	Timing	Evidence	Determination	Compliance Finding
		<ul style="list-style-type: none"> <li>iii. the name of the person that deposited the waste; and</li> <li>iv. for the annual period make these registers available on request.</li> </ul>			No special waste type 2 was disposed in the reporting period.	
38	Records and reporting - Complaints reporting	<p>Complaints reporting</p> <p>The licence holder must record the following information in relation to complaints received by the licence holder (whether received directly from a complainant or forwarded to them by the Department or another party) about any alleged emissions from the premises:</p> <ul style="list-style-type: none"> <li>(a) the name and contact details of the complainant, (if provided);</li> <li>(b) the time and date of the complaint;</li> <li>(c) the complete details of the complaint and any other concerns or other issues raised; and</li> <li>(d) the complete details and dates of any action taken by the licence holder to investigate or respond to any complaint.</li> </ul>	Ongoing	P01_Complaints Register IMG_0963	No complaints were received by Fernview in the reporting period (P01).	Not applicable
39	Records and reporting - Compliance reporting	<p>The licence holder must maintain accurate and auditable books including the following records, information, reports, and data required by this licence:</p> <ul style="list-style-type: none"> <li>(a) the calculation of fees payable in respect of this licence;</li> <li>(b) any maintenance of infrastructure that is performed in the course of complying with conditions 1 and 21 of this licence;</li> <li>(c) monitoring programmes undertaken in accordance with conditions 27, 28, 29, 30, 32, 33, and 34 of this licence; and</li> <li>(d) complaints received under condition 38 of this licence.</li> </ul>	Ongoing	C01_Annual Licence Fee for L944320241 (Fernview Landfill)  R01_Fernview Gingin Landfill Part V Annual Environmental Report 2025 Appendix D  P01_Complaints Register IMG_0963	<ul style="list-style-type: none"> <li>a.) the licence fee calculatable for 2025 indicates that for the period to 01/11/2025 3512.80 tonnes of waste (&lt;5,000 tonnes/y) and no waste or discharge component fees were applicable (C01).</li> <li>b.) No maintenance of infrastructure records was available for the 2025 reporting period.</li> <li>c.) The monitoring records associated with the conditions in the licence are included in the Evidence Register (R01)</li> <li>d.) no complaints were received by Fernview in the reporting period (P01) under condition 38 of this licence.</li> </ul>	Compliant
40	Records and reporting - Compliance reporting	<p>The books specified under condition 39 must:</p> <ul style="list-style-type: none"> <li>(a) be legible;</li> <li>(b) if amended, be amended in such a way that the original version(s) and any subsequent amendments remain legible and are capable of retrieval;</li> <li>(c) be retained by the licence holder for the duration of the licence; and</li> <li>(d) be available to be produced to an inspector or the CEO as required.</li> </ul>	Ongoing	R01_Fernview Gingin Landfill Part V Annual Environmental Report 2025 Appendix D	Appendix D of this report contains a register of the audit evidence associated with this report which is available to an inspector or the CEO as required.	Compliant
41	Records and reporting - Compliance reporting	<p>The licence holder must:</p> <ul style="list-style-type: none"> <li>(a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period, and</li> <li>(b) prepare and submit to the CEO an Annual Audit Compliance Report in the approved form by 31 March each year.</li> </ul>	31 March each year	R01_Fernview Gingin Landfill Part V Annual Environmental Report 2025 Appendix B  R01_Fernview Gingin Landfill Part V Annual Environmental Report 2025 Appendix A	<p>Appendix B of this AER (R01) is an audit of compliance with the conditions of the licence during the period 19/11/2024 to 31/12/2025.</p> <p>Appendix A of this AER (R01) contains an Annual Audit Compliance Report specifying compliance with the conditions of the licence for the period 19/11/2024 to 31/12/2025.</p>	Compliant
42	Records and reporting - Compliance reporting	<p>The licence holder must:</p> <ul style="list-style-type: none"> <li>(a) prepare an Environmental Report that provides information in accordance with <b>Table 14</b> for the preceding annual period, and</li> <li>(b) submit that Environmental Report to the CEO by 31 March each year.</li> </ul>	31 March each year	R01_Fernview Gingin Landfill Part V Annual Environmental Report 2025 Section 3  E10_Tabulated Groundwater Results	Section 3 of this AER provides the information required to meet Table 14.	Compliant

Condition No.	Condition Factor	Condition	Timing	Evidence	Determination	Compliance Finding																		
		<table border="1"> <thead> <tr> <th>Condition</th> <th>Requirement</th> </tr> </thead> <tbody> <tr> <td>-</td> <td>Summary of the active landfill area and special waste disposal area that includes: (a) areas that have been subject to waste deposition for the annual period; (b) remaining void capacity for waste deposition in Landfill Cell 1 at the end of the annual period; and (c) summary to any alterations to cell rehabilitation sequencing and timing.</td> </tr> <tr> <td>6</td> <td>A summary of all fire incidents that have occurred during the annual period.</td> </tr> <tr> <td>27,28</td> <td>Tonnage of wastes accepted/rejected for each waste type during the annual period in table format.</td> </tr> <tr> <td>29</td> <td>A summary of monitoring undertaken in relation to the stormwater management system, including data/observations in a table format for the annual period.</td> </tr> <tr> <td>30-33</td> <td>A summary of leachate monitoring undertaken, including monitoring data in a table format for the annual period. A summary of action taken within the annual period to address exceedances of the leachate operational levels.</td> </tr> <tr> <td>34,35, and 36</td> <td>A groundwater and surface water monitoring report demonstrating compliance with conditions 34, 35, and 36, which includes: a) a clear statement of the scope of work carried out; b) a description of the field methodologies employed; c) a summary of the field and laboratory quality assurance/quality control (QA/QC) program; d) copies of the field monitoring records and field QA/QC documentation; e) an assessment of reliability of field procedures and laboratory results; f) a tabulated summary of results, as well as the raw data provided in an accompanying Microsoft Excel spreadsheet digital document/file (or a compatible equivalent digital document/file), with all results being clearly referenced to laboratory certificates of analysis; g) a diagram with aerial image overlay showing all monitoring locations; h) an interpretive summary and assessment of the results against relevant assessment levels for water, as published in the <i>Guideline: Assessment and management of contaminates sites</i>; i) an interpretive summary and assessment of results against previous monitoring results; j) trend graphs to provide graphical representation of historical results and to support the interpretive summary.</td> </tr> <tr> <td>37</td> <td>Plan of disposal locations for Special Waste Type 2</td> </tr> <tr> <td>38</td> <td>Complaints summary for the annual period</td> </tr> </tbody> </table>	Condition	Requirement	-	Summary of the active landfill area and special waste disposal area that includes: (a) areas that have been subject to waste deposition for the annual period; (b) remaining void capacity for waste deposition in Landfill Cell 1 at the end of the annual period; and (c) summary to any alterations to cell rehabilitation sequencing and timing.	6	A summary of all fire incidents that have occurred during the annual period.	27,28	Tonnage of wastes accepted/rejected for each waste type during the annual period in table format.	29	A summary of monitoring undertaken in relation to the stormwater management system, including data/observations in a table format for the annual period.	30-33	A summary of leachate monitoring undertaken, including monitoring data in a table format for the annual period. A summary of action taken within the annual period to address exceedances of the leachate operational levels.	34,35, and 36	A groundwater and surface water monitoring report demonstrating compliance with conditions 34, 35, and 36, which includes: a) a clear statement of the scope of work carried out; b) a description of the field methodologies employed; c) a summary of the field and laboratory quality assurance/quality control (QA/QC) program; d) copies of the field monitoring records and field QA/QC documentation; e) an assessment of reliability of field procedures and laboratory results; f) a tabulated summary of results, as well as the raw data provided in an accompanying Microsoft Excel spreadsheet digital document/file (or a compatible equivalent digital document/file), with all results being clearly referenced to laboratory certificates of analysis; g) a diagram with aerial image overlay showing all monitoring locations; h) an interpretive summary and assessment of the results against relevant assessment levels for water, as published in the <i>Guideline: Assessment and management of contaminates sites</i> ; i) an interpretive summary and assessment of results against previous monitoring results; j) trend graphs to provide graphical representation of historical results and to support the interpretive summary.	37	Plan of disposal locations for Special Waste Type 2	38	Complaints summary for the annual period				
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## Appendix C Part V Licence L9443/2024/1



<b>Licence number</b>	L9443/2024/1
<b>Licence holder</b>	Fernview Environmental Pty Ltd
<b>ACN</b>	617 674 469
<b>Registered business address</b>	Unit 1, 48 Kelvin Road MADDINGTON WA 6109
<b>DWER file number</b>	DER2024/000264
<b>Duration</b>	19/11/2024 to 19/11/2044
<b>Date of issue</b>	19/11/2024
<b>Premises details</b>	Fernview Landfill Lot 98 Wannamal Road South CULLALLA WA 6503  Legal description - Lot 98 on Plan 75926 Certificate of Title Volume 2847 Folio 974 As defined by the coordinates in Schedule 1 of the Licence

<b>Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)</b>	<b>Assessed design capacity</b>
Category 64: Class II or III putrescible landfill site: premises (other than clean fill premises) on which waste of a type permitted for disposal for this category of prescribed premises, in accordance with the <i>Landfill Waste Classification and Waste Definitions 1996</i> , is accepted for burial.	150,000 tonnes per annual period

This licence is granted to the licence holder, subject to the attached conditions, on 19 November 2024, by:

**Grace Heydon**  
**MANAGER WASTE INDUSTRIES**

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

[L9443/2024/1 \(19/11/2024\)](#)

## Licence history

Date	Reference number	Summary of changes
19/11/2024	L9443/2024/1	Licence granted.

## Interpretation

In this licence:

- (a) the words ‘including’, ‘includes’ and ‘include’ in conditions mean “including but not limited to”, and similar, as appropriate;
- (b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (c) where tables are used in a condition, each row in a table constitutes a separate condition;
- (d) any reference to an Australian or other standard, guideline, or code of practice in this licence:
  - (i) if dated, refers to that particular version; and
  - (ii) if not dated, refers to the latest version and therefore may be subject to change over time;
- (e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and
- (f) unless specified otherwise, all definitions are in accordance with the EP Act.

**NOTE:** This licence requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this licence.

## Licence conditions

The licence holder must ensure that the following conditions are complied with:

### Infrastructure and equipment

- The licence holder must ensure that the site infrastructure and equipment listed in Table 1 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 1.

**Table 1: Infrastructure and equipment requirements**

Site infrastructure and equipment	Operational requirement	Infrastructure location
Landfill Cell 1	a) The landfill cell liner must be maintained in good condition, free from leaks and defects.	As shown in Schedule 1, Figures 1 and 2
Leachate collection, extraction and recirculation system	a) All leachate pipes, gravity feeds and pumps must be free of blockage, leaks and defects; b) All leachate sumps must be maintained free of leaks and defects. c) All leachate removed from the leachate sumps must be directed to the leachate pond or recirculated onto the landfill surface. d) A leachate head of less than 300 mm must be maintained above the landfill base liner system. e) Probes must be operational to identify variations in leachate head levels. f) Recirculation system must be maintained to ensure correct operation in the conveyance of leachate to active landfill cells for recirculation. g) The leachate detection system must be capable of directing leachate leakage from the entire area of the Cell 1 Landfill footprint to the monitoring point where it can be monitored and extracted.	As shown in Schedule 1, Figures 5, 6 and 7
Leachate Pond	a) Leachate pond liner must be maintained in good condition, free from leaks and defects. b) A 1000 mm freeboard must be maintained at all times. c) The pond must not overtop. d) Probes must be operational to identify high leachate levels. e) Leachate is not to be used for any purpose on the premises other than recirculation back onto the landfill to assist with waste decomposition.	As shown in Schedule 1, Figures 2 and 4
Stormwater management system	a) The surface water management system must be maintained to prevent stormwater	As shown in Schedule 1, Figure 4

Site infrastructure and equipment	Operational requirement	Infrastructure location
	runoff from becoming contaminated by waste on the premises.	(Sediment Pond and associated drains)
Fuel storage tank	<ul style="list-style-type: none"> <li>a) Must be labelled with appropriate placards.</li> <li>b) Must be self-bunded.</li> <li>c) Must hold a maximum of 60,000 L of fuel.</li> <li>d) All fuel lines must have the option to be switched off.</li> <li>e) Areas around the tank to be kept clean and free of waste build-up.</li> </ul>	As shown in Schedule 1, Figure 3
150,000 L water tank for reticulation and dust suppression	<ul style="list-style-type: none"> <li>a) Must be readily accessible, clearly signposted and in good condition.</li> </ul>	As shown in Schedule 1, Figure 1 and Figure 3
100,000 L firefighting water storage tank	<ul style="list-style-type: none"> <li>a) Must be readily accessible, clearly signposted and in good condition.</li> </ul>	As shown in Schedule 1, Figure 1 and Figure 3
Portable fire extinguishers	<ul style="list-style-type: none"> <li>a) Must be readily accessible, clearly signposted and in good condition.</li> <li>b) Must be provided at the locations shown in Figure 2 of Schedule 1.</li> <li>c) Must be provided in all plant and equipment and personnel vehicles.</li> </ul>	As shown in Schedule 1, Figure 3
Quick response fire unit (vehicle mounted)	<ul style="list-style-type: none"> <li>a) Must have a minimum of 1,000 L water with operational pump and 20 m of 19 mm diameter (minimum) hose.</li> <li>b) Must be kept in close proximity to any work areas on the site.</li> </ul>	Within the prescribed premises boundary as shown in Schedule 1, Figure 1
Water truck	<ul style="list-style-type: none"> <li>a) Must always be available on the premises for dust suppression or firefighting where required.</li> <li>b) Must be able to carry a minimum of 14,000 L of water.</li> <li>c) Must be fitted with 200 L firefighting foam injection systems with remote control cannon.</li> </ul>	Within the prescribed premises boundary as shown in Schedule 1, Figure 1
Firebreak	<ul style="list-style-type: none"> <li>a) To be maintained around the boundary of the premises, to a width of 3 metres.</li> </ul>	As shown in Schedule 1, Figure 3
Wheel cleaning facility	<ul style="list-style-type: none"> <li>a) To be maintained in good condition to effectively remove dirt from the wheels of vehicles exiting the premises.</li> </ul>	As shown in Schedule 1, Figure 2
Site perimeter fencing	<ul style="list-style-type: none"> <li>a) Must be maintained in good condition, at a minimum of 1.8 m high, to prevent the entry of fauna and feral animals onto the premises.</li> <li>b) Entrance gates to the premises must be securely locked when the premises is unattended to prevent unauthorised access.</li> </ul>	As shown in Schedule 1, Figure 1
Signage	Clearly displays the following information:	At the site entrance

Site infrastructure and equipment	Operational requirement	Infrastructure location
	a) hours of operation; b) contact phone number for information and complaints or notification of fires; c) a list of materials that are accepted; d) the types of waste that must not be deposited on the premises and a contact telephone number for alternative disposal options; and e) a warning, indicating penalties for people lighting fires.	
Groundwater monitoring wells	c) Seven (7) groundwater monitoring wells at the landfill site, designated GG1, GG2, GG3, GG4, GG5, GG6, GGN7 maintained in good working order to allow representative samples to be collected.	As shown in Schedule 1, Figure 9

## Waste Acceptance

2. The licence holder must only accept onto the premises waste of a type that:
- (a) does not exceed the rate at which that waste is received; and
  - (b) meets the relevant acceptance specification, as set out in Table 2.

**Table 2: Waste acceptance criteria**

Waste type	Rate at which waste is received	Acceptance specification <sup>1</sup>
Clean Fill	Combined 150,000 tonnes per annual period.	None specified
Inert Waste Type 1		Waste containing visible asbestos or ACM shall not be accepted.
Inert Waste Type 2		Plastics only. Tyres shall not be accepted.
Putrescible Waste		None specified.
Special Waste Type 2		None specified.
Contaminated Solid Waste		Must meet the Acceptance Criteria for Class II landfills and be supported by documentation that demonstrates compliance with these Acceptance Criteria.

Note 1: Additional requirements for the acceptance of controlled waste (including tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.

3. The licence holder must ensure that where waste does not meet the waste acceptance criteria set out in condition 2, it is removed from the premises by the delivery vehicle or, where that is not possible, stored in a quarantine storage area or container and removed to an appropriately authorised facility within 14 days of receipt.

## Operational controls

### Waste processing

4. The licence holder must ensure that the waste types specified in Table 3 are only subjected to the corresponding processes, subject to the corresponding process limits and/or specifications.

**Table 3: Waste processing**

	Waste Type	Processes	Process limits and/or specifications
1.	Soft wastes accepted for landfilling	Disposal of first layer of waste by landfilling	<ul style="list-style-type: none"> <li>a) All solid waste materials delivered to the premises must be contained in a covered vehicle and only unloaded within the active cell and within the vicinity of the tipping face.</li> <li>b) Landfilling must only occur in Landfill Cell 1 as depicted in Figure 1.</li> <li>c) Prior to any placement of waste, a new layer of non-woven and needle punched separation geotextile is to be progressively installed over, and in contact with, the Landfill Cell 1 leachate aggregate layer in accordance with Figure 8.</li> <li>d) The tipping area must be maintained no wider than 30 metres and no higher than two (2) metres in vertical height;</li> <li>e) Only landfilling of soft waste is to occur.</li> <li>f) Waste must be placed as a full 2 m layer in one lift.</li> </ul>
2.	All waste types accepted for landfilling	Acceptance and disposal of waste by landfilling (subsequent layers)	<ul style="list-style-type: none"> <li>a) All solid waste materials delivered to the premises must be contained in a covered vehicle and only unloaded within the active cell and within the vicinity of the tipping face.</li> <li>b) The licence holder must manage the landfilling activities within the active Class II putrescible landfill by: <ul style="list-style-type: none"> <li>(i) only disposing of waste by landfilling within a defined tipping area in Landfill Cell 1;</li> <li>(ii) ensuring that temporary batters within the waste materials do not exceed slopes of 1V:3H;</li> <li>(iii) ensuring that at every 10 m in vertical height of waste placement, the next lift is set back 5 m to create a bench;</li> <li>(i) ensuring that no waste is temporarily stored or landfilled within 35 m from the boundary of the premises;</li> <li>(ii) ensuring that highly odourous waste is disposed of by burial immediately following acceptance;</li> </ul> </li> </ul>

	Waste Type	Processes	Process limits and/or specifications
			<ul style="list-style-type: none"> <li>(iii) ensuring earthen bunding and surface grading are maintained to direct stormwater away from the tipping area;</li> <li>(iv) maintaining the tipping area no wider than 30 metres and no higher than two (2) metres in vertical height;</li> <li>(v) compacting waste layers to not more than 500 mm thick as soon as is practicable after placement of waste, and not later than at the end of each working day;</li> <li>(vi) covering the waste in accordance with the requirements of condition 5;</li> <li>(vii) ensuring that daily cover and intermediate cover is removed prior to recommencing landfilling;</li> <li>(viii) stockpiling sufficient cover material to allow waste to be covered in accordance with condition 5 and to cover exposed combustible waste in the event of a fire.</li> </ul>
3.	Special Waste Type 2	Acceptance and disposal of waste by landfilling (subsequent layers)	<ul style="list-style-type: none"> <li>a) The licence holder or their representative, must complete and sign the original controlled waste tracking form, noting, in writing, any discrepancies between waste declared and waste received.</li> <li>b) The licence holder must keep a record of the controlled waste tracking form for at least three years.</li> <li>c) The licence holder must restrict access to the landfill site where the waste is buried to authorised personnel only.</li> </ul>
4.	Inert Waste Type 1	Receipt, handling and storage prior to disposal	<ul style="list-style-type: none"> <li>a) Crushing and screening of waste is not permitted.</li> </ul>

5. The licence holder must ensure that cover is applied and maintained on landfilled waste types in accordance with the corresponding cover requirements in Table 4 and that sufficient stockpiles of cover are maintained on the premises at all times to meet the requirements of this condition.

**Table 4: Daily cover requirements**

Waste Type	Material	Depth/specifications	Timescales
Clean fill	No cover required		
Inert Waste Type 1			
Putrescible waste Contaminated solid	Inert Waste Type 1, clean fill	150 mm	As soon as practicable and not later than the end of the working day that the waste was

Waste Type	Material	Depth/specifications	Timescales
waste	or soil		deposited.
		300 mm and graded at a minimum slope of 2% away from the landfill active face.	As soon as practicable where surfaces will be exposed for 90 days or more
Inert Waste Type 2	Inert Waste Type 1, clean fill or soil	300 mm	As soon as practicable after acceptance and no later than the end of the working day that the waste was accepted

## Emissions and discharges

### Fire management

6. The licence holder must notify the CEO of the following as soon as practicable, but no later than 7 days after the event of:
  - (a) any fire on the premises; and/or
  - (b) any accident, malfunction, or emergency which results or could result in the discharge of firefighting wash-water or other wastes from the premises.
7. The licence holder must ensure that:
  - (a) firefighting equipment and systems are in good working order and capable of controlling and extinguishing a waste material fire within the premises;
  - (b) any unauthorised fire on the premises is extinguished as soon as possible;
  - (c) all accumulated and recoverable fire wash-water and other waste that may result from firefighting on the premises is collected and removed within 24-hours of a fire event;
  - (d) any firefighting wash-water is removed without delay by a carrier licensed under the *Environmental Protection (Controlled Waste) Regulations 2004* or placed into the onsite leachate pond; and
  - (e) all fire impacted waste is disposed of into Landfill Cell 1.

### Dust emissions

8. The licence holder must ensure that no visible dust crosses the premises boundary
9. The licence holder must restrict vehicle speeds to less than 30 km/hr on the premises.
10. The licence holder must manage fugitive dust emissions from the active tipping area during operational hours by:
  - (a) applying water;
  - (c) ensuring waste is levelled and compacted as soon as practicable after it is discharged and at a minimum at the end of the working day; and
  - (d) ensuring waste is placed and compacted to ensure all faces are stable and capable of retaining further waste placement or placement of cover or rehabilitation material.
11. All operational vehicles must pass through the wheel cleaning facility prior to exiting the premises.

## Department of Water and Environmental Regulation

### Discharges to land and water

12. The licence holder must immediately recover, or remove and dispose of, spills of environmentally hazardous materials including fuel, oil, or other hydrocarbons, whether inside or outside an engineered containment system.
13. The licence holder must ensure that all material used for the recovery, removal, and/or disposal of environmentally hazardous materials is stored in an impermeable container prior to disposal to a suitably licensed premises.

### Windblown waste

14. The licence holder must ensure that windblown waste is contained within the boundary of the premises and that windblown waste is returned to the tipping area on at least a weekly basis.
15. The licence holder must operate and maintain a minimum of six (6) portable litter control screens with a minimum height of 4 m and minimum length of 5 m, located within 15 m downwind of the working face of the landfill.

### Odour

16. The licence holder must ensure that odour emitted from the premises does not unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person who is not on the premises.
17. The licence holder shall prepare, maintain and implement an Odour Management Plan for the premises that sets out:
  - (a) the identification of odour sources within the premises;
  - (b) how odour emissions will be mitigated from the identified sources;
  - (c) the identification of procedures to support the mitigation of odour emissions;
  - (d) details of engineered controls to support the mitigation of odour emissions;
  - (e) site inspections to be undertaken to identify unreasonable sources of odour; and
  - (f) measures to be undertaken if unreasonable odour emissions are detected outside of the prescribed premises boundary.
18. The licence holder must submit to the CEO the Odour Management Plan prepared pursuant to condition 17 by 30 June 2025.

### Noise

19. All vehicles entering the premises and within the licence holder's control must be fitted with broadband reversing alarms.
20. The licence holder must ensure that waste is not accepted at the premises outside of the hours of 7:00 to 17:00 Monday to Friday, and 7:00 to 16:00 on Saturdays and Public Holidays.

### Vermin/pests

21. The licence holder must implement the following feral animal, vermin and weed management measures:
  - (a) check and record the integrity of the premises boundary fence on a weekly basis and undertake repairs within 1 week of any damage being identified;
  - (b) undertake vermin prevention measures including baiting and trapping; and

## Department of Water and Environmental Regulation

- (c) inspect the premises monthly for the presence of weeds, record visible observations of the inspections and take and record measures to prevent the spread and growth of weeds.

## Specified actions

- 22.** The licence holder must submit to the CEO the information in Table 5 in accordance with the requirements and timescale outlined in Table 5.

**Table 5: Specified actions**

	Information	Requirements	Timescale
1.	Capping Plan	The licence holder must prepare and submit a Capping Plan for Landfill Cell 1 to the CEO which includes details on: <ul style="list-style-type: none"> <li>a) the design;</li> <li>b) material specifications;</li> <li>c) landfill gas collection;</li> <li>d) current and finished survey levels; and</li> <li>e) construction quality assurance planning.</li> </ul>	3 months prior to completion of waste disposal in Landfill Cell 1
2.	Landfill Gas Management Plan	The licence holder shall prepare and submit to the CEO a Landfill Gas Management Plan which includes: <ul style="list-style-type: none"> <li>a) a detailed description and drawings/layout plans of the proposed active landfill gas extraction and management system;</li> <li>b) installation procedures;</li> <li>c) installation timeline;</li> <li>d) monitoring procedures; and</li> <li>e) maintenance procedures.</li> </ul>	30 November 2026

## Monitoring

### General monitoring

- 23.** The licence holder shall ensure that:
- (a) All liquid samples are collected and preserved in accordance with AS/NZS 5667.1;
  - (b) All surface water sampling is conducted in accordance with AS/NZS 5667.4;
  - (c) All groundwater sampling is conducted in accordance with AS/NZS 5667.11;
  - (d) All laboratory samples are submitted to and tested by a laboratory with NATA accreditation for the parameters being measured unless indicated otherwise within the relevant table.
- 24.** The licence holder must ensure that all monitoring equipment used on the premises to comply with the conditions of this licence is maintained and calibrated in

accordance with the manufacturer’s specifications.

- 25. The licence holder must, where the requirements of calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.
- 26. The licence holder must ensure that:
  - (a) monthly monitoring is undertaken at least 15 days apart;
  - (b) quarterly monitoring is undertaken at least 2 months apart; and
  - (c) annual monitoring is undertaken at least 9 months apart.

**Input and output monitoring**

- 27. The licence holder must record the total amount of waste accepted onto the premises, for each waste type listed in Table 6, in the corresponding unit, and for each corresponding time period, as set out in Table 6.

**Table 6: Waste accepted onto the premises**

Waste Type	Units	Time Period
Waste accepted in accordance with Table 2	Tonnes	Each load arriving at the premises

- 28. The licence holder must record the total amount of waste removed from the premises, for each waste type listed in Table 7, in the corresponding unit, and for each corresponding time period set out in Table 7.

**Table 7: Waste removed from the premises**

Waste Type	Units	Time Period
Waste type as defined in the Landfill Definitions	Tonnes	Each load rejected or removed from the premises

**Stormwater management monitoring**

- 29. The licence holder must monitor and record, at a minimum, the parameters specified in Table 8 at the frequency specified in Table 8, and record any management actions undertaken to ensure compliance with condition 1.

**Table 8: Stormwater management system monitoring requirement**

	Monitoring actions	Parameter/unit	Frequency/Recording period
1.	Check for the presence of erosion around Landfill Cell 1 and stormwater management structures	Observation of site conditions and signs and location of erosion	Weekly/following rainfall
2.	Check vegetation for signs of deterioration due to surface water flow paths	Observation of vegetation condition	Weekly/following rainfall
3.	Monitor water levels within the stormwater pond	Water levels in the stormwater pond (m AHD)	Monthly

### Leachate Management System monitoring

30. The licence holder must inspect and monitor the leachate management system to monitor leachate levels in all ponds and sumps and manage movement of leachate between sumps and ponds and the recirculation system. The licence holder must monitor and record, at a minimum, the parameters specified in Table 9 at the locations, levels and recording frequency specified in Table 9.

**Table 9: Leachate Management System monitoring requirements**

Parameter	Location	Requirements	Frequency/Recording period
Base of monitoring point (m AHD)	Level base of leachate sumps and base formation of the landfill	To be conducted prior to the operation of the landfill	Once prior to operation of landfill
Depth of freeboard (mm)	Leachate Pond	N/A	Weekly
Depth of leachate (m AHD)	Landfill Cell 1 leachate detection layer at the base of the landfill	To be conducted when leachate levels are representative of those within the landfill and not during leachate pumping	Weekly
	Landfill Cell 1 riser and sump	To be conducted when leachate levels are representative of those within the landfill and not during leachate pumping	Weekly
Volume of leachate (m <sup>3</sup> )	Pumped out of Landfill Cell 1 sump	N/A	Weekly
Volume of leachate (m <sup>3</sup> )	Extracted from the leachate detection layer of Landfill Cell 1	N/A	Weekly
Volume of leachate added to Landfill Cell 1 (m <sup>3</sup> )	Recirculated from Leachate Pond	N/A	weekly
Volume of leachate added to Landfill Cell 1 (m <sup>3</sup> )	Recirculated from Landfill Cell 1 sump	N/A	weekly
Volume of leachate removed offsite (m <sup>3</sup> )	Pumped out of leachate pond or extracted from the leachate detection layer of Landfill Cell 1	Any leachate extracted that cannot be used for recirculation is to be tankered offsite.	Each time leachate is removed offsite

## Department of Water and Environmental Regulation

31. The licence holder must maintain the leachate operational levels in Table 10 according to the specifications in that table.

**Table 10: Leachate operational levels**

Location	Parameter	Operational level	Averaging period
Base of Landfill Cell 1 liner	Leachate head in Landfill Cell 1	Level of less than or equivalent to 300 mm	Monthly
Leachate pond	Freeboard	Greater than or equal to 1000 mm	Instantaneous

32. In case of an occurrence of a Reportable Event at a corresponding reference point as specified in Table 11, the licence holder must take the relevant management action as specified in Table 11.

**Table 11: Management actions**

Location	Event	Management action
Base of Landfill Cell 1 liner	Any time the leachate head exceeds the operational level in Table 10 for a duration of longer than 24 hours.	(a) The licence holder must investigate the cause of the exceedance within 24-hours. (b) Where the investigation identifies failure or blockage of the leachate management system, the licence holder must remove leachate from the system via a licensed liquid waste transport carrier to a licensed liquid waste facility within 48-hours of observing the exceedance. (c) The licence holder must report the exceedance and results of the investigation including proposed resolution to the CEO within 7 days.
Leachate pond	Any time the freeboard is less than the operational level in Table 10 for a duration of longer than 24-hours.	

**Leachate quality monitoring**

33. The licence holder must undertake the process monitoring at the monitoring point reference locations specified in Table 12 according to the corresponding specifications.

**Table 12: Leachate quality monitoring**

Monitoring location	Parameter	Units	Frequency	Method
Leachate Pond	Visual appearance: colour, turbidity, free phase hydrocarbons and foaming	N/A	quarterly	N/A
Landfill Cell 1 riser and sumps	pH <sup>1</sup>	pH units	quarterly	Spot sample in accordance with Condition 23
	Electrical conductivity <sup>1</sup>	µS/cm		
Landfill Cell 1 Leachate detection	Total soluble solids	mg/L		
	Cations and anions –			

Monitoring location	Parameter	Units	Frequency	Method
layer  Leachate Pond	Potassium, chloride and sulfate			
	Total metals – arsenic (total) cadmium, chromium, copper, iron (total), lead manganese, mercury, molybdenum, nickel, selenium, zinc			
	Nutrients – Ammoniacal nitrogen, nitrate-nitrogen, total nitrogen, total phosphorus, total organic carbon, chemical oxygen demand			
	Total recoverable hydrocarbons Monocyclic aromatic hydrocarbons – benzene, toluene, methylbenzene, xylene (total) Polycyclic aromatic hydrocarbons – acenaphthene, anthracene, ben(a)pyrene, fluoranthene, naphthalene, pyrene Organochlorine pesticides – Aldrin, chlordane (and metabolites), DDT (and metabolites), dieldrin, chlorpyrifos, HCB, heptachlor (and its epoxide), lindane Organophosphates – parathion, demeton-S-methyl, maldison, diazinon, dimethoate, fenamiphos, fenthion Other – atrazine, TCE, PCE and polychlorinated biphenyls (total)	µg/L	quarterly	Spot sample in accordance with Condition 23

Note 1: In-field non-NATA accredited analysis permitted

**Groundwater and surface water monitoring**

34. The licence holder must monitor groundwater quality in accordance with Table 13.

**Table 13: Groundwater quality monitoring**

Monitoring location	Parameter	Unit	Frequency	Averaging period
Monitoring wells as shown in Figure 9, Schedule 1  Stormwater	Standing water level <sup>1</sup>	m(AHD)	Quarterly	Spot sample, in accordance with condition 23
	pH <sup>1</sup>	pH unit		
	Electrical conductivity <sup>1</sup>	µS/cm		
	Redox potential <sup>1</sup>	Eh		
	Chemical oxygen demand	mg/L		
	Nitrate-nitrogen			
Ammonia-nitrogen				

Department of Water and Environmental Regulation

pond (when flowing) as shown in Figure 4, Schedule 1	Total nitrogen			
	Total phosphorus			
	Total dissolved solids			
	Total organic carbon			
	Dissolved oxygen <sup>1</sup>			
	Major cations and anions: calcium, magnesium, potassium, sodium, chloride, bicarbonate and sulphate			
	Heavy Metals: Aluminium, Arsenic, Cadmium, Chromium, Copper, Iron (total) Lead, Manganese, Mercury, Nickel, Selenium and Zinc			
Organics: Phenols, Polyaromatic hydrocarbons (PAH), Organochlorine pesticides, Organophosphate pesticides (Demeton-S-Methyl, Diazinon, Dimethoate, Fenamiphos, Fenthion, Malathion and Parathion), Polychlorinated biphenyls (PCB), Atrazine, BTEX (benzene, toluene, ethylbenzene, xylens), Total Petroleum Hydrocarbons and Trichloroethylene/ Perchloroethylene	mg/L	Six monthly	Spot sample, in accordance with condition 23	

Note 1: In-field non-NATA accredited analysis permitted

- 35.** The licence holder must adhere to the following field quality assurance and quality control procedures, as specified in Schedule B2 of the Assessment of Site Contamination NEPM, and must include as a minimum:
- (a) decontamination procedures for the cleaning of tools and sampling equipment before sampling and between samples;
  - (b) field instrument calibration for instruments used on site;
  - (c) blind replicate samples and rinsate blanks must be collected in the field and sent to the primary laboratory to determine the precision of the field sampling and laboratory analytical program;
  - (d) completed field monitoring sheets / sampling logs for each sample collected, showing:
    - (i) time of collection;
    - (ii) location of collection;
    - (iii) initials of sampler;
    - (iv) sampling method;
    - (v) field analysis results for electrical conductivity, dissolved oxygen, temperature, redox potential and pH;
    - (vi) duplicate type / location (if relevant); and
    - (vii) site observations and weather conditions, and
  - (e) chain-of-custody documentation must be completed which details the following information:
    - (i) site identification;
    - (ii) the sampler;
    - (iii) nature of the sample;

## Department of Water and Environmental Regulation

- (iv) collection time and date;
  - (v) analyses to be performed;
  - (vi) sample preservation method;
  - (vii) departure time from site;
  - (viii) dispatch courier(s); and
  - (ix) arrival time at the laboratory.
- 36.** All sample analysis must be undertaken by laboratories with current accreditation from the National Association of Testing Authorities (NATA) for the relevant parameters, unless otherwise specified in Table 13.

## Records and reporting

### Waste acceptance reporting

- 37.** The licence holder must:
- (a) maintain a waste acceptance register which ensures that a record is made of:
    - (i) the time and date of each waste delivery;
    - (ii) the name and licence number of the carrier;
    - (iii) the weight of the waste;
    - (iv) a detailed description of the type of waste;
    - (v) the determination of the waste type as defined in condition 2;
    - (vi) all supporting documentation related to waste acceptance and classification;
    - (vii) any loads of waste rejected from the premises; and
    - (viii) the amount of landfill levy payable in respect of the waste.
  - (b) Maintain a register of Special Waste Type 2 disposed of at the premises which must include:
    - (i) a plan showing the position of Special Waste Type 2 disposed of at the premises;
    - (ii) the date of the deposit
    - (iii) the name of the person that deposited the waste; and
    - (iv) for the annual period make these registers available on request.

### Complaints reporting

- 38.** The licence holder must record the following information in relation to complaints received by the licence holder (whether received directly from a complainant or forwarded to them by the Department or another party) about any alleged emissions from the premises:
- (a) the name and contact details of the complainant, (if provided);
  - (b) the time and date of the complaint;
  - (c) the complete details of the complaint and any other concerns or other issues raised; and

- (d) the complete details and dates of any action taken by the licence holder to investigate or respond to any complaint.

**Compliance reporting**

- 39.** The licence holder must maintain accurate and auditable books including the following records, information, reports, and data required by this licence:
  - (a) the calculation of fees payable in respect of this licence;
  - (b) any maintenance of infrastructure that is performed in the course of complying with conditions 1 and 21 of this licence;
  - (c) monitoring programmes undertaken in accordance with conditions 27, 28, 29, 30, 32, 33, and 34 of this licence; and
  - (d) complaints received under condition 38 of this licence.
- 40.** The books specified under condition 39 must:
  - (a) be legible;
  - (b) if amended, be amended in such a way that the original version(s) and any subsequent amendments remain legible and are capable of retrieval;
  - (c) be retained by the licence holder for the duration of the licence; and
  - (d) be available to be produced to an inspector or the CEO as required.
- 41.** The licence holder must:
  - (a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period, and
  - (b) prepare and submit to the CEO an Annual Audit Compliance Report in the approved form by 31 March each year.
- 42.** The licence holder must:
  - (a) prepare an Environmental Report that provides information in accordance with Table 14 for the preceding annual period, and
  - (b) submit that Environmental Report to the CEO by 31 March each year.

**Table 14: Environmental reporting requirements**

Condition	Requirement
-	Summary of the active landfill area and special waste disposal area that includes: <ul style="list-style-type: none"> <li>(a) areas that have been subject to waste deposition for the annual period;</li> <li>(b) remaining void capacity for waste deposition in Landfill Cell 1 at the end of the annual period; and</li> <li>(c) summary to any alterations to cell rehabilitation sequencing and timing.</li> </ul>
6	A summary of all fire incidents that have occurred during the annual period.
27,28	Tonnage of wastes accepted/rejected for each waste type during the annual period in table format.

Condition	Requirement
29	A summary of monitoring undertaken in relation to the stormwater management system, including data/observations in a table format for the annual period.
30-33	<p>A summary of leachate monitoring undertaken, including monitoring data in a table format for the annual period.</p> <p>A summary of action taken within the annual period to address exceedances of the leachate operational levels.</p>
34,35, and 36	<p>A groundwater and surface water monitoring report demonstrating compliance with conditions 34, 35, and 36, which includes:</p> <ul style="list-style-type: none"> <li>a) a clear statement of the scope of work carried out;</li> <li>b) a description of the field methodologies employed;</li> <li>c) a summary of the field and laboratory quality assurance/quality control (QA/QC) program;</li> <li>d) copies of the field monitoring records and field QA/QC documentation;</li> <li>e) an assessment of reliability of field procedures and laboratory results;</li> <li>f) a tabulated summary of results, as well as the raw data provided in an accompanying Microsoft Excel spreadsheet digital document/file (or a compatible equivalent digital document/file), with all results being clearly referenced to laboratory certificates of analysis;</li> <li>g) a diagram with aerial image overlay showing all monitoring locations;</li> <li>h) an interpretive summary and assessment of the results against relevant assessment levels for water, as published in the <i>Guideline: Assessment and management of contaminates sites</i>;</li> <li>i) an interpretive summary and assessment of results against previous monitoring results;</li> <li>j) trend graphs to provide graphical representation of historical results and to support the interpretive summary.</li> </ul>
37	Plan of disposal locations for Special Waste Type 2
38	Complaints summary for the annual period

## Definitions

In this licence, the terms in Table 15 have the meanings defined.

**Table 15: Definitions**

Term	Definition
Acceptance Criteria	Has the same meaning given to that term under the Landfill Waste Classification and Waste Definitions 1996
ACM	means asbestos containing material as defined in the Department of Health 2009, Guidelines for Assessment, Remediation and Management of Asbestos Contaminated Sites, Western Australia.
ACN	Australian Company Number
Active Landfill Area	The active waste disposal area in Landfill Cell 1 where waste is required to be deposited to achieve final waste contours.
AHD	Means the Australian Height Datum
Annual Audit Compliance Report (AACR)	means a report submitted in a format approved by the CEO (relevant guidelines and templates are available on the Department's website).
annual period	a 12 month period commencing from 1 January until 31 December of the same year.
AS/NZS5667.1	means the Australian Standard AS/NZS 5667.1 Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples.
AS/NZS 5667.4	means the Australian Standard AS/NZS 5667.4 Water Quality – Sampling – Guidance on sampling from lakes, natural and man-made
AS/NZS5667.11	means the Australian Standard AS/NZS 5667.11 Water Quality – Sampling – Guidance on sampling of groundwaters.
Assessment of Site Contamination NEPM	means the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended from time to time.
Averaging Period	means the time over which a limit is measured or a monitoring result is obtained.
books	has the same meaning given to that term under the EP Act.

Term	Definition
CEO	means Chief Executive Officer of the department. “submit to / notify the CEO” (or similar), means either: Director General Department administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 Joondalup DC WA 6919 or: <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
Contaminated Solid Waste	Means a solid waste that contains contaminants that meets the solid waste acceptance requirements of Table 2, Condition 2
department; DWER	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
discharge	has the same meaning given to that term under the EP Act.
emission	has the same meaning given to that term under the EP Act.
EP Act	<i>Environmental Protection Act 1986</i> (WA)
EP Regulations	<i>Environmental Protection Regulations 1987</i> (WA)
Highly Odorous Waste	means solid waste approved for acceptance under the Licence which has the potential to produce odour emissions that can be detected beyond the premises boundary if left uncovered.
Inert Waste Type 1	Has the same meaning given to that term under the <i>Landfill Waste Classification and Waste Definitions 1996</i> .
Inert Waste Type 2	Has the same meaning given to that term under the <i>Landfill Waste Classification and Waste Definitions 1996</i> .
Landfill Definitions	means the document titled “ <i>Landfill Waste Classification and Waste Definitions 1996</i> ”.
leachate head management level	A leachate level within a cell that: <ul style="list-style-type: none"> <li>(a) is demonstrative of the engineering and management measures for that cell performing as designed;</li> <li>(b) does not represent an unacceptable risk to the environment and public health; and</li> <li>(c) is set at a level which provides an early warning system for potential engineering or management control failure and to enable appropriate investigation or corrective management measures to be implemented to mitigate potential impacts to the environment and public health.</li> </ul>
licence	refers to this document, which evidences the grant of a licence by the CEO under section 57 of the EP Act, subject to the specified

Term	Definition
	conditions contained within.
licence holder	refers to the occupier of the premises, being the person specified on the front of the licence as the person to whom this licence has been granted.
NATA	means the National Association of Testing Authorities, Australia.
NATA accredited	means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis.
premises	refers to the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map, Figure 1 in Schedule 1 to this licence.
prescribed premises	has the same meaning given to that term under the EP Act.
Putrescible waste	Has the same meaning given to that term under the Landfill Waste Classification and Waste Definitions 1996.
Soft waste	Municipal, commercial, industrial and other waste that has a low chance of containing large sharp items that could puncture the landfill liner.
Special Waste Disposal Area	Means the designated disposal areas within an approved landfill cell for the disposal of Special Waste Type 2.
Special Waste Type 2	Has the same meaning given to that term under the Landfill Waste Classification and Waste Definitions 1996.
spot sample	means a discrete sample representative at the time and place at which the sample is taken.
waste	has the same meaning given to that term under the EP Act.

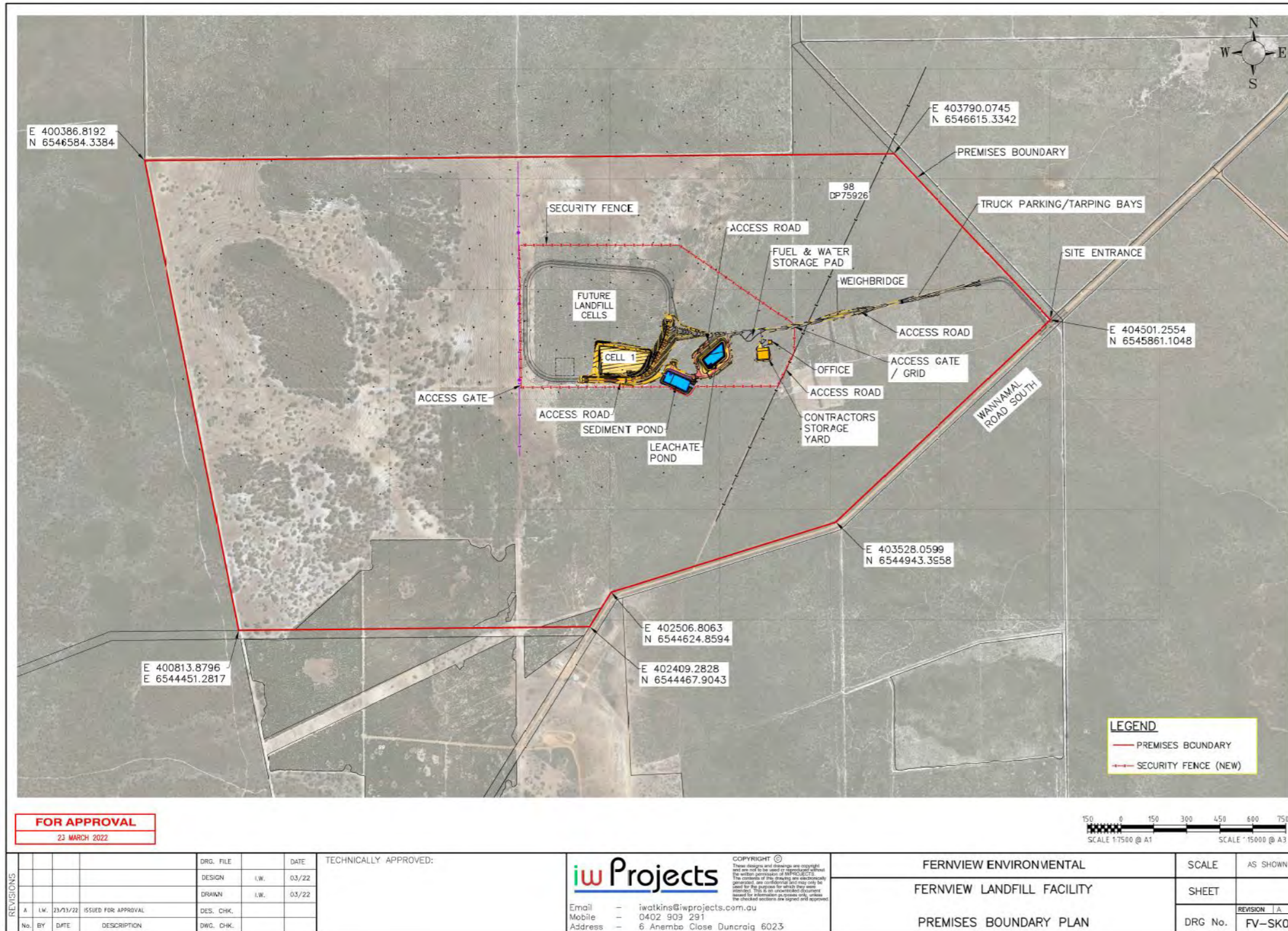
---

**END OF CONDITIONS**

# Schedule 1: Maps

## Premises map

The boundary of the prescribed premises is shown in the map below (Figure 1).



REVISIONS	No.	BY	DATE	DESCRIPTION	DWG. CHK.	DES. CHK.
	A	LW	23/03/22	ISSUED FOR APPROVAL		

DRG. FILE	DATE	TECHNICALLY APPROVED:
DESIGN	LW	03/22
DRAWN	LW	03/22

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FERNVIEW ENVIRONMENTAL  
FERNVIEW LANDFILL FACILITY  
PREMISES BOUNDARY PLAN

SCALE	AS SHOWN
SHEET	
DRG No.	REVISION A FV-SK01

Figure 1: Map of the boundary of the prescribed premises

L9443/2024/1 (19/11/2024)

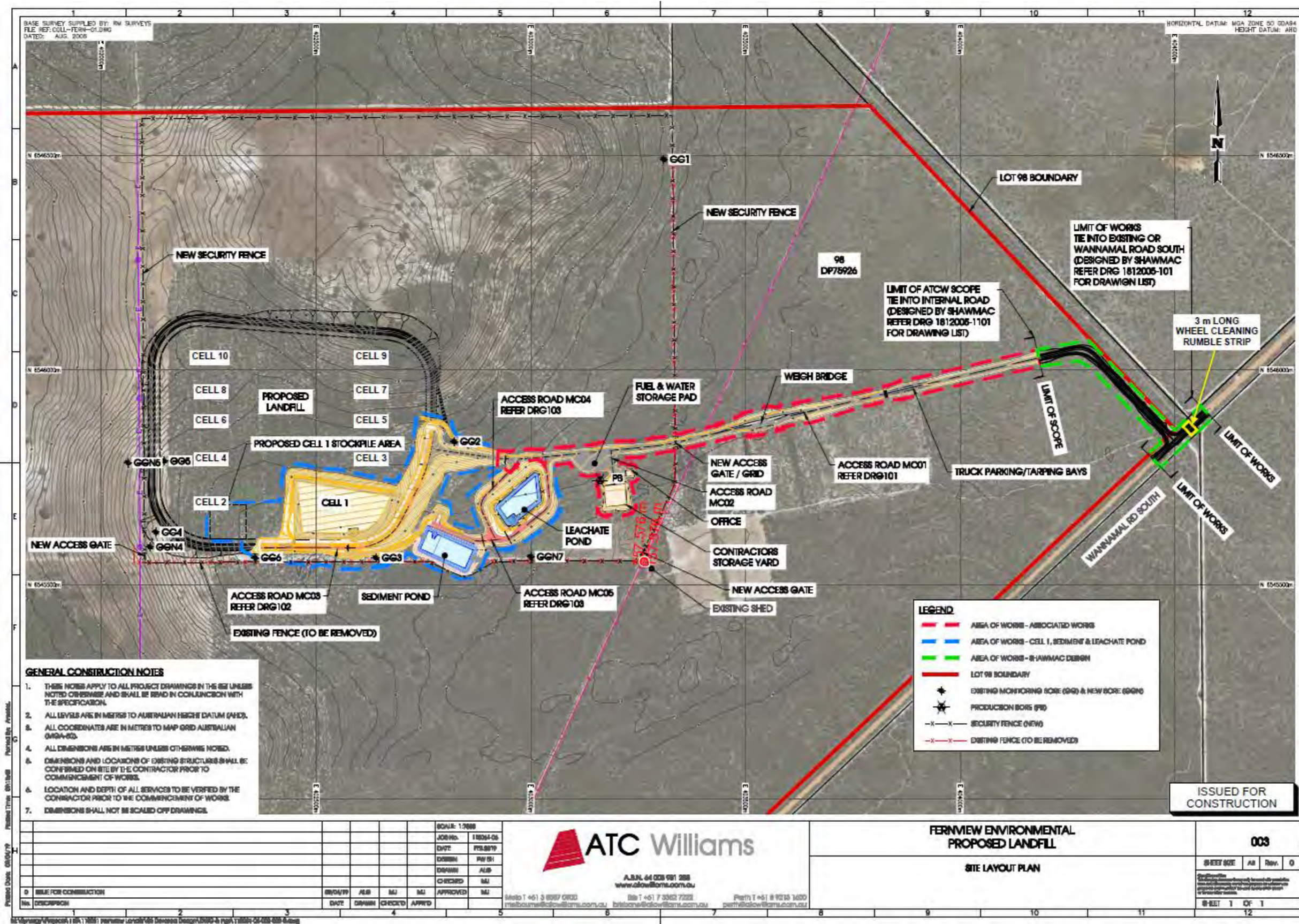


Figure 2: Site layout

L9443/2024/1 (19/11/2024)

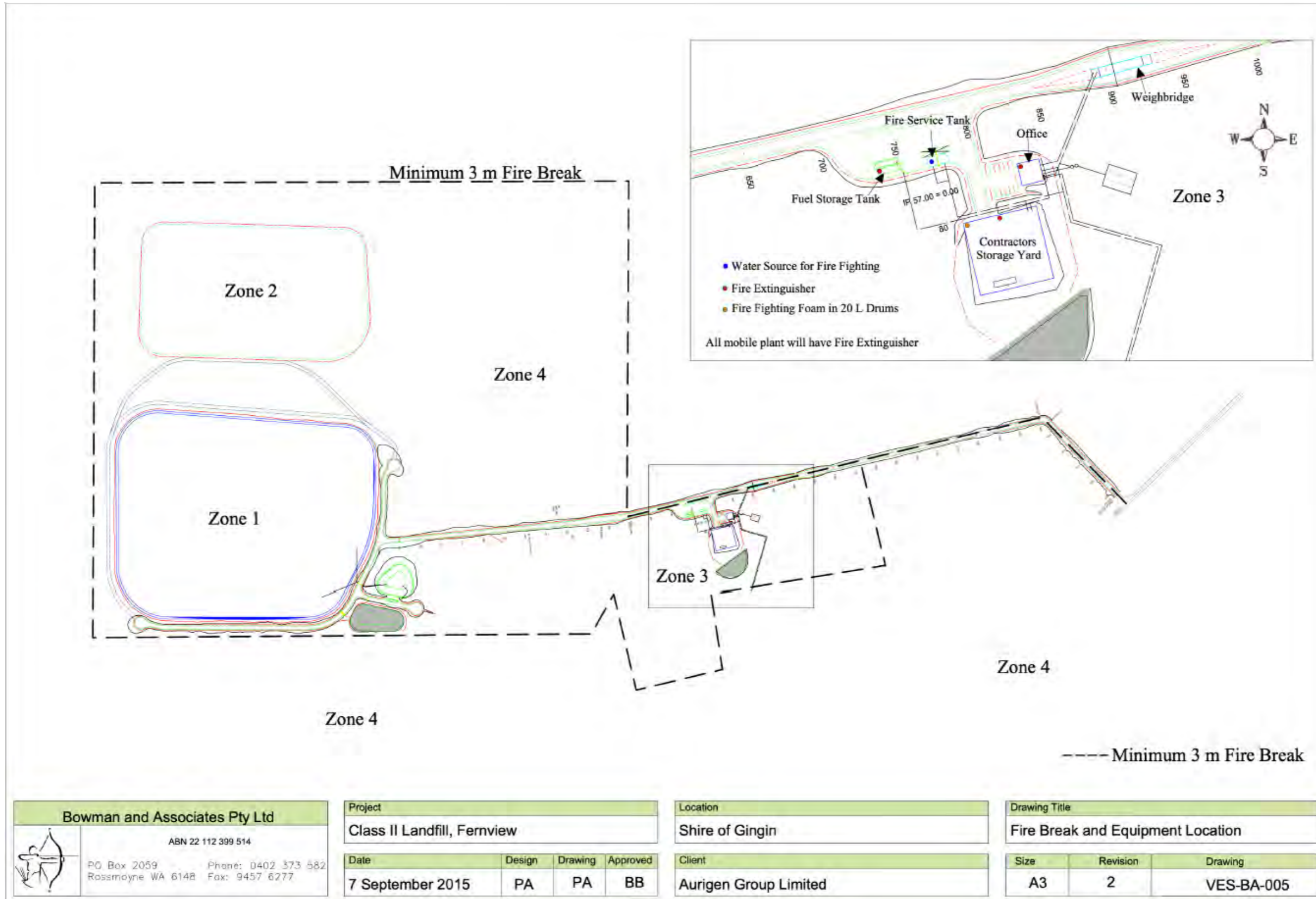


Figure 3: Fire break and equipment location

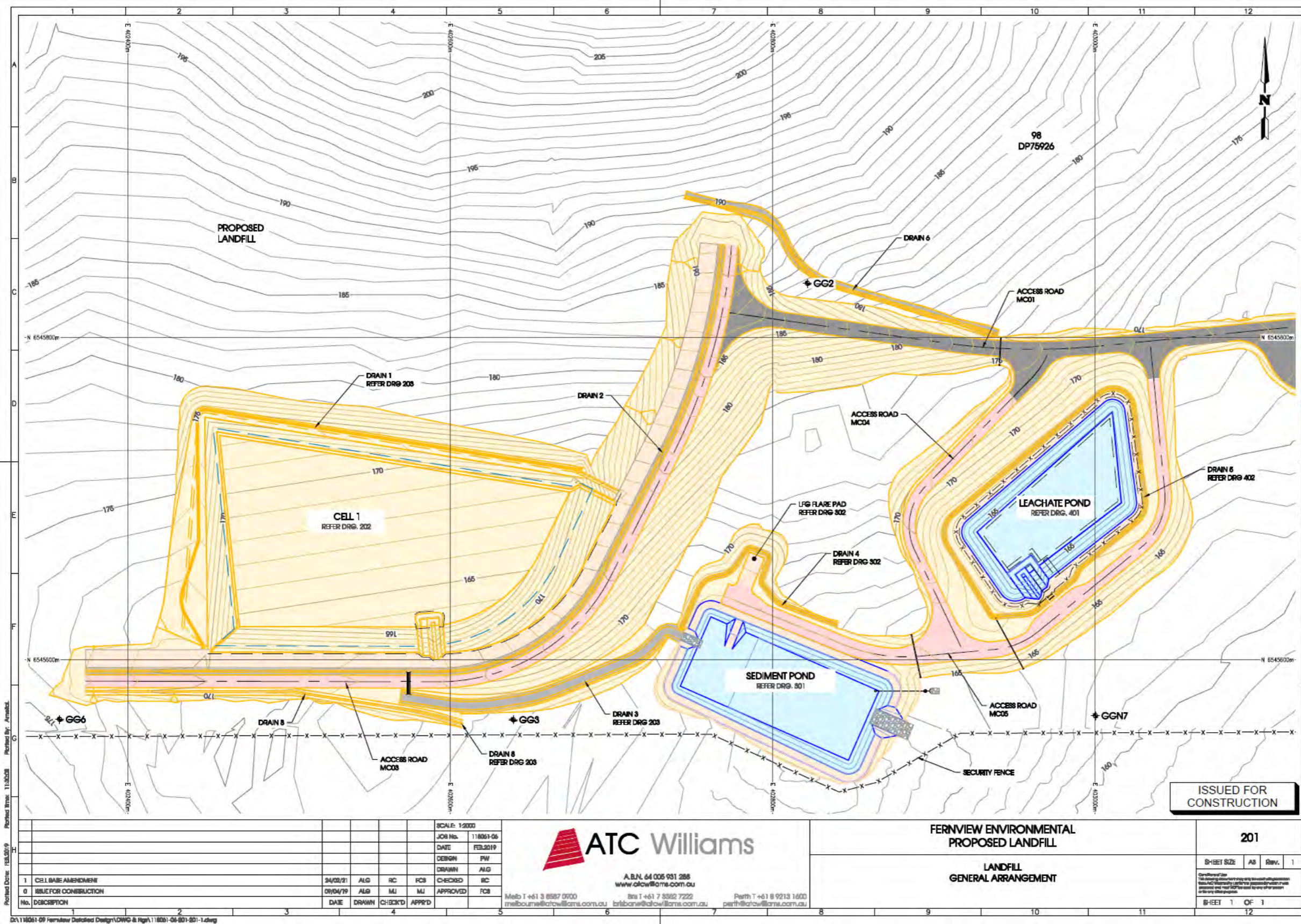


Figure 4: Stormwater management system and leachate management system arrangement

L9443/2024/1 (19/11/2024)

IR-T06 Licence template (v10.0) (May 2024)

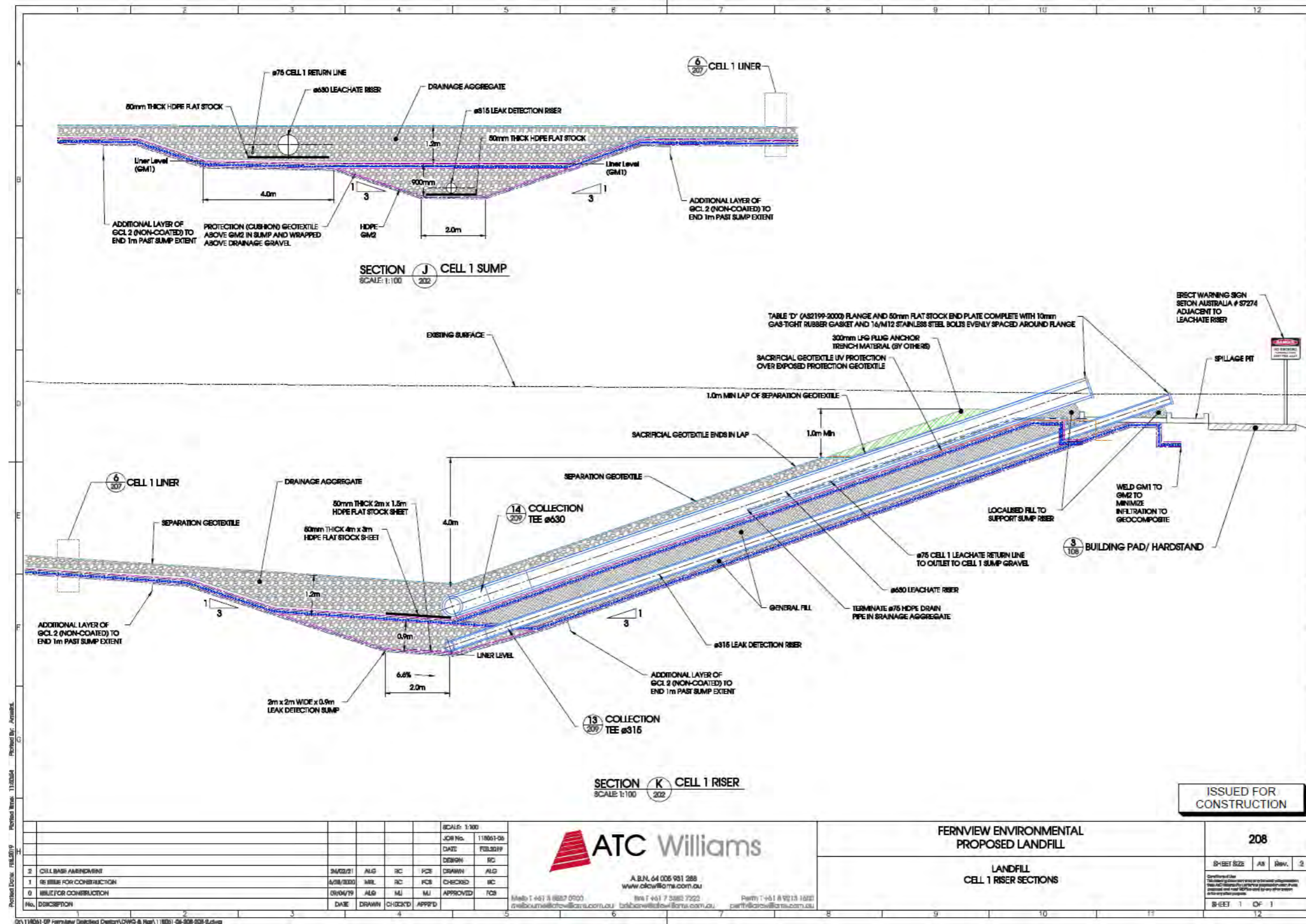


Figure 5: Leachate collection and extraction system in Landfill Cell 1

L9443/2024/1 (19/11/2024)

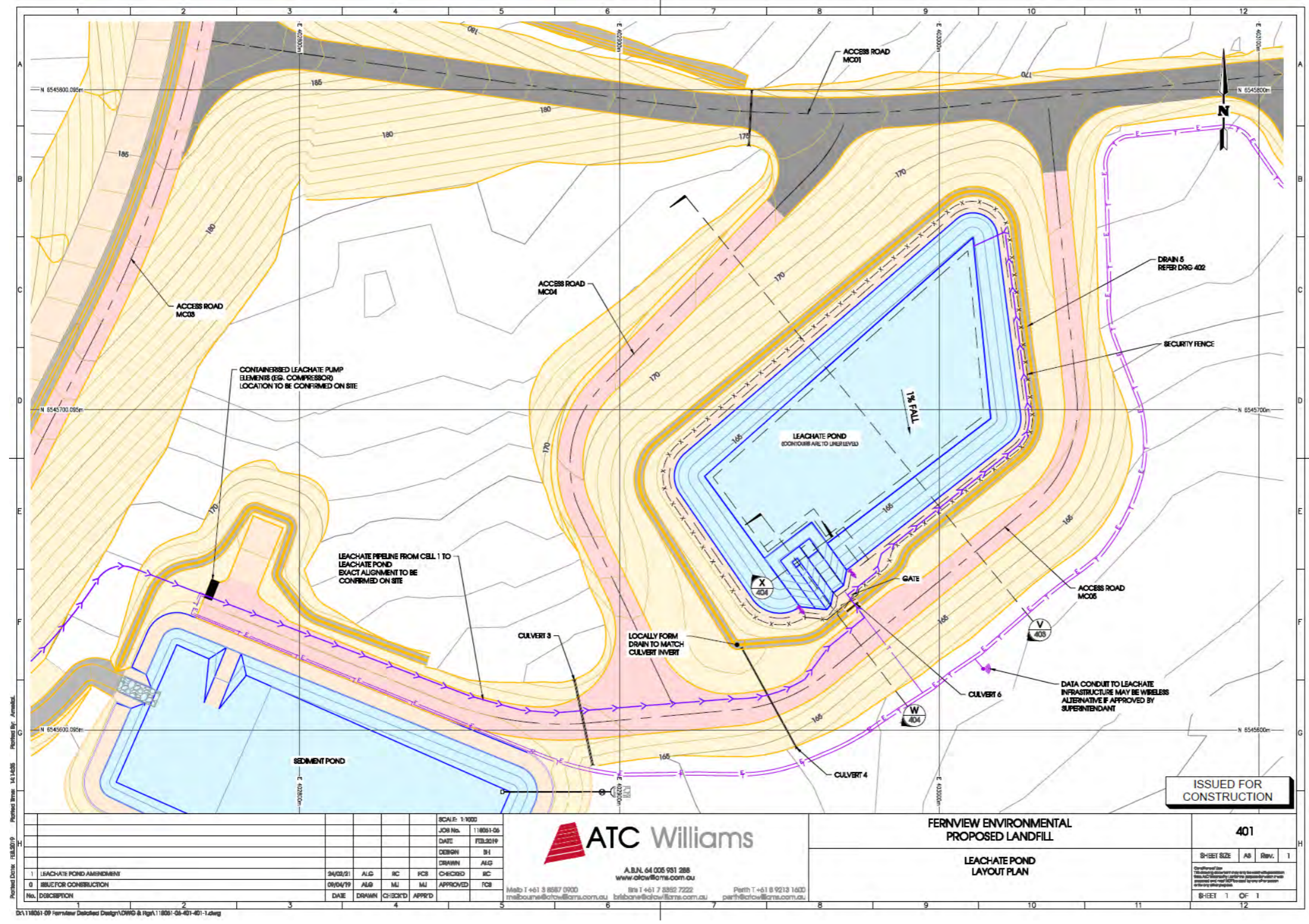


Figure 6: Leachate management system (leachate pipeline from cell 1 to leachate pond)

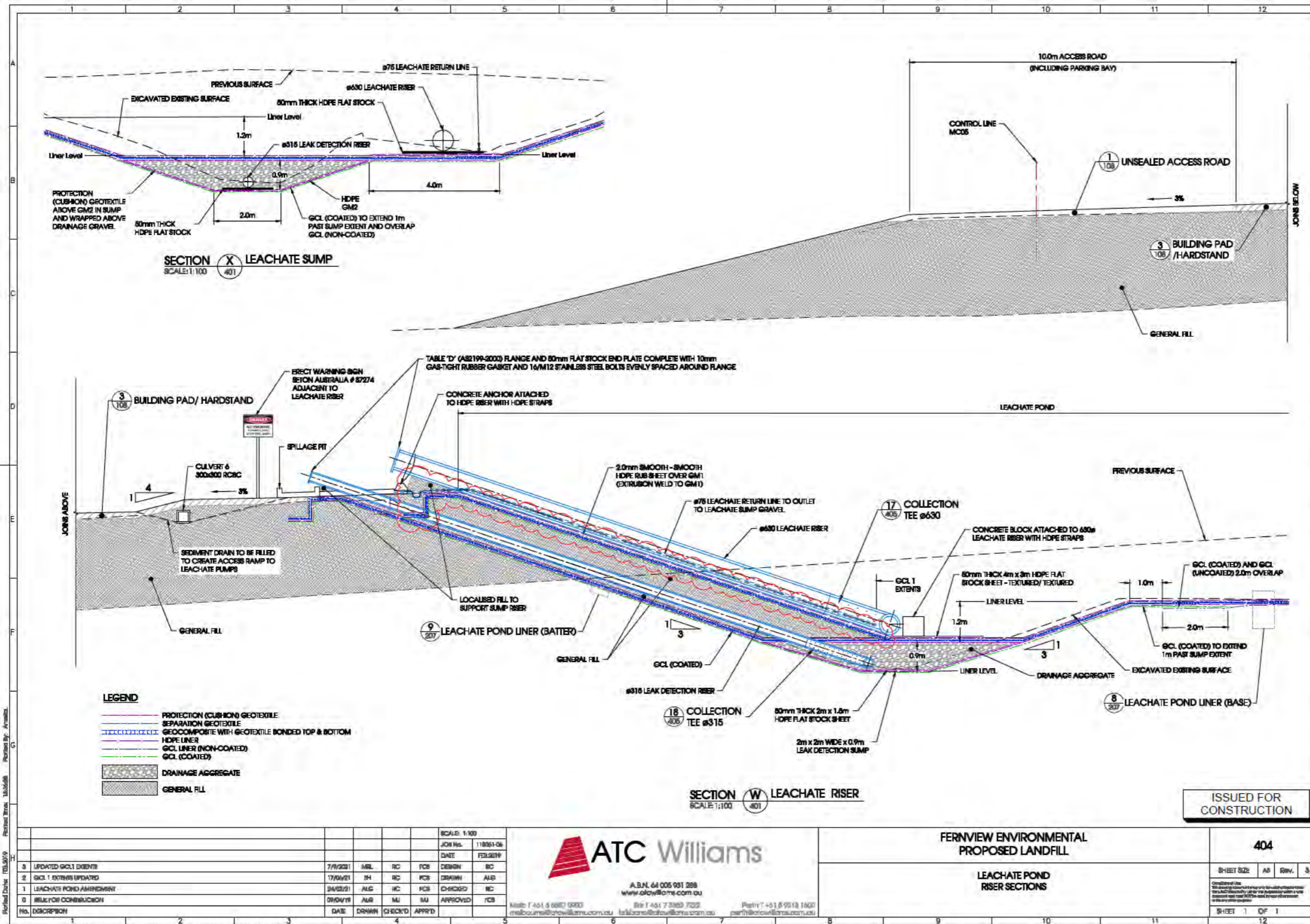


Figure 7: Leachate pond riser sections

L9443/2024/1 (19/11/2024)

IR-T06 Licence template (v10.0) (May 2024)

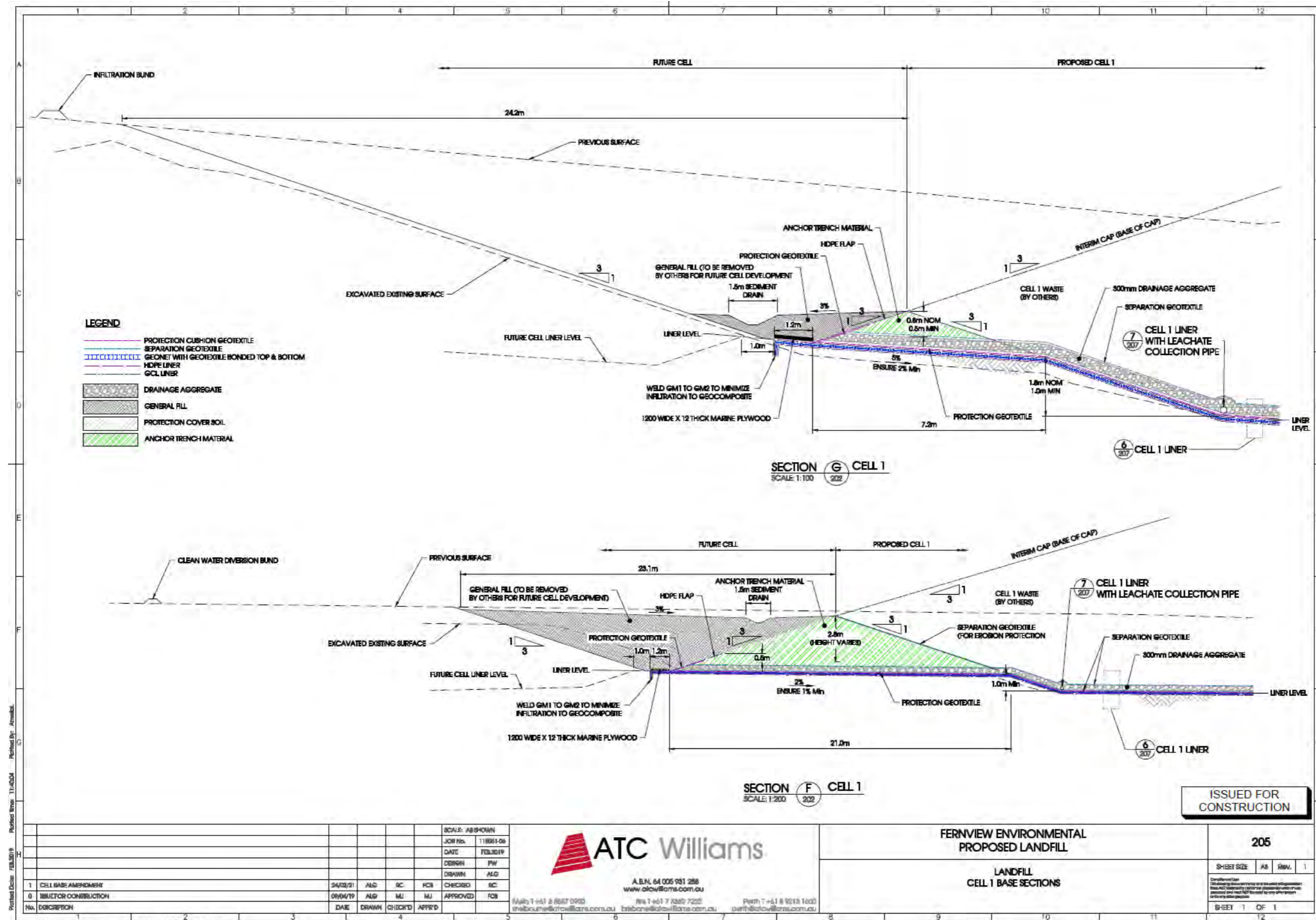


Figure 8: Cell 1 liner details

L9443/2024/1 (19/11/2024)

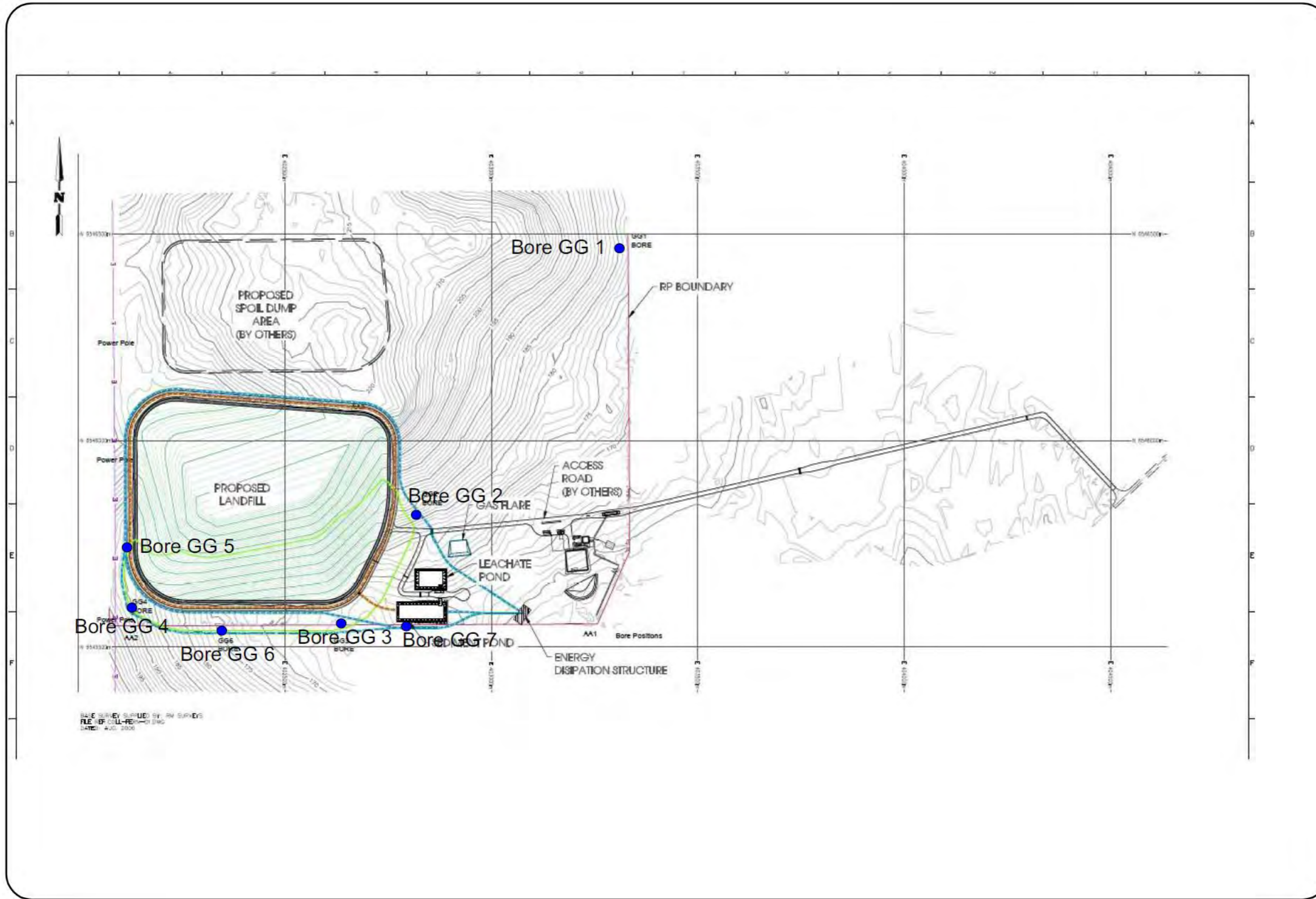


Figure 9: Groundwater monitoring well location

## Appendix D Evidence Register

**Table D.2: Evidence Register**

Code	Reference	Author	Electronic	Hard copy	Topic
C01	C01_Annual Licence Fee for L944320241 (Fernview Landfill)	DWER	X		Email from DWER 14/11/2025 with invoice for Fernview Licence fee based on calculation that Fernview had received <5000 tonnes of waste up to 31 October 2025.
E01	E01_Fernview Weighbridge Data September Quarter 2025	Fernview	X		Export file from Cooee containing waste records for September 2025.
E02	E02_Fernview Environmental Weighbridge Report - DEC 31 2025 Quarter	Fernview	X		Export file from Cooee containing waste records for October to December 2025 (Q4).
E03	E03_February 2025 GW Sample Results	ARL	X		Certificate of Analysis (1193243) for groundwater samples taken 28 February 2025 from Fernview Groundwater monitoring bores: GG1, GG2, GG3, GG4, GG5, GG6, GG7
E04	E04_July 2025 GW Sample Results	ARL	X		Certificate of Analysis (1250293) for groundwater samples taken 28 February 2025 from Fernview Groundwater monitoring bores: GG1, GG2, GG3, GG4, GG5, GG6, GG7
E05	E05_Stass Env Standard Operating Procedure - groundwater	Stass	X		Stass Environmental Standard Technical Operating Procedure 17 Groundwater Sampling.
E06	E06_1193243_COC	Stass	X		Chain of custody dated 28/02/2025 for the ground water samples submitted and analysed by ARL (E03).
E07	E07_1250293_COC	Stass	X		Chain of custody dated 30/07/2025 for the ground water samples submitted and analysed by ARL (E04).
E08	E08_Field February 2025 Fernview	Stass	X		Field Sheet and instrument calibration sheet for 28/02/2025.
E09	E09_Field July 2025 Fernview	Stass	X		Field Sheet and instrument calibration sheet for 30/07/2025.
E10	E10_Tabulated Groundwater Results	JBS&G	X		Consolidated Spreadsheet of Groundwater Monitoring Data

Code	Reference	Author	Electronic	Hard copy	Topic
M01	M01_Site Inspection Notes 16/03/2026	JBS&G	X		Notes taken during site visit and interviews with Tom Rudas and Damien Flugge on 16/03/2026 at Fernview Landfill.
P01	P01_Complaints Register IMG_0963	JBS&G	X		Photo 24/02/2026 of the Complaints Register located at the weighbridge
P02	P02_Cover Stockpile IMG_0925	JBS&G	X		Photo 24/02/2026 of Stockpile of Cover Material
P03	P03_Landfill with Cover IMG_0932	JBS&G	X		Photo 24/02/2026 of the Landfill with Cover Material in place
P04	P04_Partial Cover Landfill IMG_0924	JBS&G	X		Photo of 24/02/2026 of the Landfill during operations with one face open and others under cover.
P05	P05_Speed Signage IMG_0916	JBS&G	X		Photo of 24/02/2026 of the 20km/h Speed Signage at the front gate
P06	P06_Waste Placement IMG_0054	JBS&G	X		Photo 22/09/2025 of waste being placed in first layer of landfill (active face)
P07	P07_Front Gate Sign IMG_0915	JBS&G	X		Photo 24/02/2026 of Front Gate Sign.
P08	P08_Diesel Tank IMG_0943	JBS&G	X		Photo 24/02/2026 of Diesel Tank
P09	P09_Covered Vehicle IMG_0022	JBS&G	X		Photo 22/09/2025 of Covered Vehicle on weighbridge
P10	P10_Covered Vehicle IMG_0931	JBS&G	X		Photo 24/02/2026 of Covered Vehicle leaving Landfill Cell 1
P11	P11_Cooee Reporting IMG_0962	JBS&G	X		Photo 24/02/2026 of Cooee Reporting Database Screen
P12	P12_Vehicle Tipping IMG_0953	JBS&G	X		Photo 24/02/2026 of Waste Truck Tipping in Landfill Cell 1
P13	P13_2m Layer IMG_0059	JBS&G	X		Photo 22/09/2025 of 2m Layer of waste being laid in Cell 1
P14	P14_Water Truck	JBS&G	X		Photo 24/02/2026 of the 11,000L Water Truck
P15	P15_Compactor IMG_0934	JBS&G	X		Photo 24/02/2026 of the Compactor
P16	P16_Landfill IMG_0983	JBS&G	X		Photo 16/03/2026 of Landfill Cell 1
P17	P17_Fire Tank 150kL IMG_0978	JBS&G	X		Photo 16/03/2026 of Fire Tank 150kL
P18	P18_Fire Tank 100kL IMG_0979	JBS&G	X		Photo 16/03/2026 of Fire Tank 100kL

Code	Reference	Author	Electronic	Hard copy	Topic
P19	P19_Moxi Fire Extinguisher	JBS&G	X		Photo 22/09/2025 of Moxi Fire Extinguisher
P20	P20_Erosion	Fernview	X		Photo July 2025 of Landfill Cell 1 Erosion
P21	P21_Erosion	Fernview	X		Photo July 2025 of Landfill Cell 1 Erosion
P22	P22_Erosion Remediation IMG_9981	Fernview	X		Photo 16/03/2025 of Area where Erosion was remediated in July 2025 around Landfill Cell 1
P23	P23_Weighbridge Sign IMG_0977	JBS&G	X		Photo 16/03/2026 of Weighbridge Conditions of Entry Sign.
R01	R01_Fernview Gingin Landfill Part V Annual Environmental Report 2025	JBS&G	X		This Annual Environmental Report
R02	R02_Stass GW Report	Stass	X		Stass Environmental Proposed Fernview Landfill, Groundwater Quality and Flow Hydrogeological Assessment Cullalla, WA for Fernview Pty Ltd [Vr 1.1] March 2024 (Appendix D)
R03	R03_JBS&G Annual Groundwater Report	JBS&G	X		Cullalla Landfill Facility – Annual Groundwater Monitoring Report Compliance Monitoring Fernview Environmental [7012101 Rev 0] 30/03/2026

## Appendix E Annual Groundwater Monitoring Report



# Cullalla Landfill Facility - October 2025 Compliance Monitoring

Fernview Environmental

Report

7012101 | 173,428 (Rev A)

10 February 2026





**We acknowledge the Traditional Custodians of Country throughout Australia and their connection to land, sea and community.**

We pay our respect to Elders past, present and emerging and in the spirit of reconciliation we commit to working together for our shared future where every person is respected, valued and has strong sense of belonging.

Caring for Country The Journey of JBS&G  
Artist: Patrick Caruso, Eastern Arrernte



## Table of Contents

<b>1.</b>	<b>Introduction .....</b>	<b>3</b>
1.1	Introduction .....	3
1.2	Background and Context.....	3
1.3	Objective .....	3
1.4	Scope of works .....	3
<b>2.</b>	<b>Data Quality Objectives .....</b>	<b>5</b>
2.1	Data Quality Objectives .....	5
2.1.1	State the Problem.....	5
2.1.2	Identify the Decision.....	5
2.1.3	Identify Inputs to the Decision .....	5
2.1.4	Define the Study Boundaries.....	5
2.1.5	Develop a Decision Rule .....	5
2.1.6	Optimise the Design for Obtaining Data.....	7
<b>3.</b>	<b>Assessment Levels .....</b>	<b>8</b>
<b>4.</b>	<b>Field Investigation Methodology.....</b>	<b>9</b>
4.1	Groundwater and Surface Water Sampling.....	9
4.1.1	Groundwater Well Sampling .....	9
4.2	Process (Leachate) Sampling.....	10
4.3	Laboratory Analyses.....	10
<b>5.</b>	<b>Results .....</b>	<b>12</b>
5.1	Field Observations .....	12
5.2	Groundwater Levels & Groundwater Flow.....	12
5.3	Groundwater Field Parameters .....	12
5.4	Groundwater Laboratory Results.....	13
<b>6.</b>	<b>Quality Assurance / Quality Control .....</b>	<b>15</b>
6.1	Discussion of Groundwater QA/QC Results.....	15
6.1.1	Precision .....	16
6.1.2	Accuracy.....	16
6.1.3	Representativeness .....	16
6.1.4	Comparability .....	16
6.1.5	Completeness .....	16
6.2	QA/QC Assessment .....	17
<b>7.</b>	<b>Discussion .....</b>	<b>18</b>
<b>8.</b>	<b>Conclusion.....</b>	<b>0</b>

9. Limitations .....	1
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### List of Tables

Table 2.1: Summary of Quality Assurance / Quality Control Program.....	6
Table 4.1: Groundwater wells required to be monitored .....	9
Table 4.2: Process (leachate) monitoring completed .....	10
Table 4.3: Groundwater and Production Bore Schedule of Analysis .....	10
Table 4.4: Leachate Ponds Schedule of Analysis .....	11
Table 5.1 Groundwater Elevation Results: October 2025 .....	12
Table 5.2: Groundwater Field Parameter Results: October 2025 .....	12
Table 6.1: QA/QC Results .....	15

### List of Figures

- Figure 1. Site Location
- Figure 2. Site Layout
- Figure 3. Groundwater Contours

### Appendices

- Appendix A Site Waste Licence
- Appendix B Field Record Forms
- Appendix C Analytical Results Tables
- Appendix D Laboratory Documentation

## Executive Summary

JBS&G Australia Pty Ltd (JBS&G) was engaged by the Fernview Environmental (the client) to provide ongoing environmental support for the bioreactor landfill facility near Cullalla, approximately 100 km north of Perth, Western Australia (WA) (the site), most recently to complete compliance groundwater monitoring. The objective of the monitoring was to provide the client with groundwater monitoring data compliant with the conditions (Conditions 33, 34 and 31) of their “prescribed premise” license (Waste License No. **L9443/2024/1**).

The scope of work for the October 2025 groundwater monitoring event (GME) included the following:

- Mobilisation to the site to undertake the following:
  - groundwater quality monitoring at 7 groundwater monitoring wells (GG01, GG02, GG03, GG04, GG05, GG06 and GG07) across the site.
- All accessible and serviceable groundwater samples were collected and preserved in accordance with AS/NZS 5667.1-1998 and AS/NZS 5667.11 and analysed by NATA accredited laboratories. Submission of primary samples for laboratory analyses in accordance with **L9443/2024/1**.

The key findings of the October 2025 groundwater monitoring event (GME) are summarised below:

- All groundwater monitoring was completed in accordance with the requirements of Waste License No. **L9443/2024/1**.
- Local groundwater flow in the Superficial aquifer is in a west to south-westerly direction, which reflects regional groundwater flow direction.
- The stormwater pond was not flowing therefore no sample was taken during October’s GME.
- No leachate was present at each location at the time of monitoring. Leachate sampling will be undertaken once sufficient leachate has accumulated.
- Although the site licence requires trend analysis, insufficient historical groundwater data are available at this time and therefore, trend analysis has not been undertaken. The results will establish a baseline for future trend analysis at the site.
- Iron concentrations across all seven wells were reported above the non-potable use guideline (NPUG) value (0.3 mg/L) during the GME, ranging from 1.2mg/L (GG05) to 46 mg/L (GG01).
- Chloride concentrations for GG01 (420 mg/L) were reported above the NPUG value (250 mg/L) during the GME.
- Aluminium (filtered) concentrations for GG03 (0.05 mg/L) were reported above the ANZG (2018) Freshwater 99% species protection level (0.027 mg/L) during the GME.
- Arsenic (filtered) concentrations for GG01, GG03 and GG06 (0.008 mg/L) were reported above the ANZG (2018) Freshwater 99% species protection level (0.0008 mg/L) during the GME.
- Chromium (III+IV) (filtered) concentrations for GG01 (0.002 mg/L), GG03 (0.01 mg/L) and GG06 (0.007 mg/L) were reported above the ANZG (2018) Freshwater 99% species protection level (0.00001 mg/L) during the GME.
- Copper (filtered) concentrations for GG02 (0.021 mg/L) and GG04 (0.003 mg/L) were reported above the ANZG (2018) Freshwater 99% species protection level (0.001 mg/L) during the GME.
- Lead (filtered) concentrations for GG02 (0.016 mg/L) were reported above the ANZG (2018) Freshwater 99% species protection level (0.001 mg/L) during the GME.
- Nitrate (as N) concentrations for GG02 (5.1 mg/L), GG04 (4.7 mg/L) and GG07 (2.6 mg/L) were reported above the ANZG (2018) Freshwater 99% species protection level (2.4 mg/L) during the GME.
- Elevated concentrations of total iron (46 mg/L) and chloride (filtered) (420 mg/L) were observed in the up-gradient well GG01, concentrations across the remainder of the monitoring network are relatively

consistent, with no clear spatial trends or up-gradient versus down-gradient differentiation evident. This distribution suggests that the exceedances may reflect broader regional groundwater conditions.

- No TPH, TRH, BTEXN, PAH, MAH, chlorinated alkanes/alkenes, phenols, OCP, OPP, herbicides or fungicides concentrations were detected above laboratory limits of reporting (LOR) in any of the analysed samples.

# 1. Introduction

## 1.1 Introduction

JBS&G Australia Pty Ltd (JBS&G) was engaged by Fernview Environmental (Fernview, the 'client') to provide ongoing environmental support for the bioreactor landfill facility near Cullalla, approximately 100km north of Perth, Western Australia (WA) (the 'site'), most recently to complete compliance groundwater monitoring. The site location is in **Figure 1**. The objective of the monitoring was to provide the client with groundwater monitoring data compliant with the conditions (Conditions 33, 34 and 31) of their "prescribed premise" license (Waste License No. **L9443/2024/1**).

This report presents the findings of the groundwater monitoring event (GME) completed at the site in October 2025.

## 1.2 Background and Context

The site operates as a prescribed premise under Licence No. L9443/2024/1 (**Appendix A**). In accordance with Licence Condition 33 (Table 12), Licence Condition 34 (Table 13), Licence Condition 35 and Licence Condition 36, routine groundwater and leachate quality monitoring is required. The licence conditions state the following (Table 12 and Table 13 can be found in **Appendix A**):

- Licence Condition 33:
  - The Licence Holder must undertake the process monitoring at the monitoring point reference locations specified in Table 12 according to the corresponding specifications
- Licence Condition 34:
  - The Licence Holder must monitor groundwater quality in accordance with Table 13.
- Licence Condition 35:
  - The licence holder must adhere to the following field quality assurance and quality control procedures, as specified in Schedule B2 of the Assessment of Site Contamination NEPM.
- Licence Condition 36:
  - All sample analysis must be undertaken by laboratories with current accreditation from the National Association of Testing Authorities (NATA) for the relevant parameters, unless otherwise specified in Table 13.

A groundwater monitoring report (this report) is required to demonstrate that the October compliance monitoring has been completed in accordance with licence conditions. This report details the results of monitoring undertaken in October 2025.

## 1.3 Objective

The objective of the monitoring is to provide the client with groundwater monitoring data compliant with licence conditions (**L9443/2024/1**).

## 1.4 Scope of works

The scope of works undertaken in October 2025 comprised the gauging, sampling and analysis of seven (7) groundwater monitoring wells, as well as a stormwater pond, in accordance with licence conditions. However, the stormwater pond was not flowing so no sample was taken as per the licence. Leachate quality monitoring is required under the site licence for four (4) specified locations including: The leachate pond, landfill cell 1 riser and sumps, landfill cell 1 leachate detection layer. However, no leachate was present at each location at the time of monitoring in October 2025. Leachate sampling will be undertaken during the

next scheduled GME once sufficient leachate is expected to have accumulated. This report presents the results obtained from the October 2025 monitoring event.

## 2. Data Quality Objectives

### 2.1 Data Quality Objectives

Data quality objectives (DQOs) were developed for the investigation, as discussed in the following sections.

#### 2.1.1 State the Problem

As per the client's licensing requirements, an October groundwater compliance monitoring event was required.

#### 2.1.2 Identify the Decision

The following decisions were required:

- Does the data collected meet the objectives of the investigation (i.e. licence compliance)?
- Is the data of an acceptable quality to draw conclusions on the nature of contaminants present at process and groundwater sampling locations?

#### 2.1.3 Identify Inputs to the Decision

Inputs to the decisions were:

- Water quality information via the gauging and sampling of groundwater monitoring wells.
- Laboratory analysis of samples for contaminants of potential concern outlined in the license.
- Screening of laboratory data against appropriate Tier 1 assessment criteria.
- Confirmation that data generated by sample analysis are of an acceptable quality to allow reliable comparison to assessment criteria and previous data by assessment of quality assurance / quality control as per the data quality indicators established in **2.1.6**.

#### 2.1.4 Define the Study Boundaries

The study area is defined as the Fernview Landfill, as presented in **Figure 1**.

The vertical extent of the groundwater investigation was approximately 54 m below ground level (bgl) at location GG05, the total depth of the deepest well, representing aquifer conditions at the base of the Superficial Aquifer.

While the site licence requires trend analysis of historical groundwater results, insufficient historical data are currently available. This investigation represents JBS&G's initial groundwater sampling event; therefore, trend analysis has not been included. The results obtained will serve as a baseline for future trend analysis at the site.

#### 2.1.5 Develop a Decision Rule

Decision rules were based on a comparison of groundwater data to Department of Water and Environmental Regulation (DWER) prepared or endorsed criteria and guidance. Specify Limits of Decision Error

This step is to establish the decision maker's tolerable limits on decision errors, which are used to establish performance goals for limiting uncertainty in the data. Data generated during this investigation must be appropriate to allow decisions to be made with confidence.

Specific limits for this project have been adopted in accordance with the appropriate guidance from National Environment Protection Council (NEPC 2013), appropriate indicators of data quality (DQIs used to assess quality assurance / quality control) and standard JBS&G procedures for field sampling and handling.

To assess the usability of the data prior to making decisions, the data was assessed against pre-determined Data Quality Indicators (DQIs) established for the project as discussed below in relation to precision,

accuracy, representativeness, comparability and completeness and sensitivity (PARCCS parameters). The acceptable limit on decision error is 95% compliance with DQIs.

The DQIs and data assessment criteria are summarised in **Table 2.1**.

- **Precision** - measures the reproducibility of measurements under a given set of conditions. The precision of the laboratory data and sampling techniques is assessed by calculating the Relative Percent Difference (RPD) of duplicate samples.
- **Accuracy** - measures the bias in a measurement system. The accuracy of the laboratory data that are generated during this study is a measure of the closeness of the analytical results obtained by a method to the 'true' value. Accuracy is assessed by reference to the analytical results of laboratory control samples, laboratory spikes and analyses against reference standards.
- **Representativeness** –expresses the degree which sample data accurately and precisely represent a characteristic of a population or an environmental condition. Representativeness is achieved by collecting samples on a representative basis across the site, and by using an adequate number of sample locations to characterise the site to the required accuracy.
- **Comparability** - expresses the confidence with which one data set can be compared with another. This is achieved through maintaining a level of consistency in techniques used to collect samples; ensuring analysing laboratories use consistent analysis techniques and reporting methods.
- **Completeness** – is defined as the percentage of measurements made which are judged to be valid measurements. The completeness goal is set at there being sufficient valid data generated during the study.
- **Sensitivity** – expresses the appropriateness of the chosen laboratory methods, including the limits of reporting, in producing reliable data in relation to the adopted site assessment criteria.

**Table 2.1: Summary of Quality Assurance / Quality Control Program**

Data Quality Indicators	Frequency	Data Quality Criteria
Precision		
Split duplicates (intra laboratory)	1 / 20 samples	<50% RPD <sup>1</sup>
Blind duplicates (inter laboratory)	1 / 20 samples	<50% RPD <sup>2</sup>
Laboratory Duplicates	1 / 20 samples	RPD <sup>1</sup> within range specified by lab
Accuracy		
Surrogate spikes	All organic samples	70-130%
Laboratory control samples	1 per lab batch	70-130%
Matrix spikes	1 per lab batch	70-130%
Representativeness		
Sampling appropriate for media and analytes	All samples	- <sup>2</sup>
Samples extracted and analysed within holding times.	-	Nutrients 28 days (nitrate 2 days) Heavy metals (28 days) Organics (14 days) VOCs (7 days)

<sup>1</sup> If the RPD between duplicates is greater than the pre-determined data quality indicator, a judgment will be made as to whether the excess is critical in relation to the validation of the data set or unacceptable sampling error is occurring in the field

<sup>2</sup> A qualitative assessment of compliance with standard procedures and appropriate sample collection methods will be completed during the DQI compliance assessment.

Data Quality Indicators	Frequency	Data Quality Criteria
		TRH & TPH (7 days) OCOP (7 days)
		Inorganics (6 months)
Laboratory Blanks	1 per lab batch	<LOR
Trip spike	1 per lab batch	70-130% recovery
Storage blank	1 per lab batch	<LOR
Rinsate sample	1 per sampling event/media	<LOR
Comparability		
Standard operating procedures for sample collection & handling	All samples	All samples
Standard analytical methods used for all analyses	All samples	NATA accreditation
Consistent field conditions, sampling staff and laboratory analysis	All samples	All samples <sup>2</sup>
Limits of reporting appropriate and consistent	All samples	All samples <sup>2</sup>
Completeness		
Sample description and COCs completed and appropriate	All samples	All samples <sup>2</sup>
Appropriate documentation	All samples	All samples <sup>2</sup>
Data from critical samples is considered valid	-	Critical samples valid
Sensitivity		
Analytical methods and limits of recovery appropriate for media and adopted Site assessment criteria	All samples	LOR<= assessment criteria

<sup>1</sup> If the RPD between duplicates is greater than the pre-determined data quality indicator, a judgment will be made as to whether the excess is critical in relation to the validation of the data set or unacceptable sampling error is occurring in the field

<sup>2</sup> A qualitative assessment of compliance with standard procedures and appropriate sample collection methods will be completed during the DQI compliance assessment.

### 2.1.6 Optimise the Design for Obtaining Data

The data collection design will be undertaken with reference to the requirements of DWER (2021) and license L9443/2024/1.

### 3. Assessment Levels

For the purposes of this investigation, assessment levels are adopted for general screening purposes only. The scope of works undertaken was for license compliance and was not intended to fully characterise groundwater quality beneath the site, nor to provide an assessment of risk to human health and/or the environment.

#### Human Health

Based on likely beneficial uses of groundwater beneath the site being limited to non-potable uses (e.g. dust suppression on site) the adopted investigation levels for the assessment of contamination are:

- DoH (2025) Contaminated sites ground and surface water chemical screening guidelines - Non-Potable Use Guidelines (NPUG).

The DoH (2025) NPUG are derived from the Australian Quality Guidelines 2000 (AQG), Australian Drinking Water Guidelines 2011 (ADWG) multiplied by a factor of ten. This is consistent with the approach adopted in Guidelines for Managing Risk in Recreational Waters 2008 (GMRRW) and the World Health Organisation. It is noted, for a number of odorous chemicals that the DoH has retained the aesthetic limit as listed in the ADWG, even where it is lower than the health guideline.

#### Ecological

Based on the relative environmental sensitivity of the site location, the following ecological investigation levels have been adopted as Tier 1 screening criteria:

- ANZG (2018) Australian and New Zealand guidelines for fresh and marine water quality – Fresh Water – 99% species protection level.

The assessment criteria are provided with the tabulated laboratory results in **Appendix C**.

## 4. Field Investigation Methodology

Groundwater monitoring well and leachate sample locations are based on the requirements of Table 12 and Table 13 of Licence No. L9159/2018/2 (**Appendix A**). These locations are illustrated in **Figure 2**.

### 4.1 Groundwater and Surface Water Sampling

The groundwater bores and surface water required to be sampled in accordance with Licence Condition 34 (Table 13) are listed in **Table 4.1**.

**Table 4.1: Groundwater wells and surface water required to be monitored**

ID	Type of Sample	Sampled (October 2025)
GG01A	Groundwater	✓
GG02		✓
GG03		✓
GG04A		✓
GG05		✓
GG06		✓
GG07		✓
Stormwater Pond	Surface Water	X

The groundwater monitoring wells were sampled using the procedure detailed below.

Based upon the objectives of the investigation and the available site investigation locations, all available groundwater wells were subject to this investigation, as shown in **Figure 2**.

#### 4.1.1 Groundwater Well Sampling

The monitoring wells were sampled using the procedure detailed below:

- Groundwater levels at 7 monitoring well locations were gauged with an oil-water interface probe to assess standing groundwater levels (SWLs) and the potential presence of non-aqueous phase liquids (NAPL) within the groundwater well. The interface probe was decontaminated between locations using Liquinox and laboratory provided distilled water.
- Purging was then undertaken with a low-flow Bladder pump and designated High-Density Polyethylene (HDPE) tubing for sampling at each monitoring well to remove standing water. The HDPE tubing was lowered to a maximum depth of two-thirds of the wetted screen length of the monitoring well prior to the commencement of purging. The pump was decontaminated between locations using Liquinox and potable water only.
- Purging of groundwater was undertaken prior to measurement of field parameters including pH, conductivity ( $\mu\text{S}/\text{cm}$ ), redox potential, dissolved oxygen (DO), total dissolved solids (TDS) and temperature ( $^{\circ}\text{C}$ ). Field parameters were recorded once every three minutes, with a purging flow rate between 250 – 400 mL/min, using a multi-parameter probe and a flow cell.
- During the development, purging and sampling, observations such as discolouration, staining, odours, and other indications of contamination were noted on the field record forms included in **Appendix B**.
- Groundwater samples were obtained when three consecutive readings of field parameters met the following criteria: pH  $\pm 0.1$ ; Dissolved oxygen  $\pm 10\%$ ; Electrical conductivity  $\pm 5\%$ ; and Redox potential  $\pm 10$  mV (NEPM 2013).

- Collected groundwater samples were immediately transferred to appropriate sample containers, which had been pre-treated suitable for the laboratory analysis. Samples were obtained in a manner that ensured minimal headspace remained in the bottles (with the exception of metals), and where appropriate were filtered in the field prior to preservation.
- Each of the sample bottles were labelled with the project ID, date, sampler’s initials, and unique ID (or QC sample name), using permanent ink marker on labels affixed to the sides of the bottles by the laboratory. In addition, the sample ID (i.e. the monitoring well ID) was also replicated on the lid of the bottles/vials if the labels became detached from the bottles during transport.
- All bottles were placed directly into a pre-chilled ice chest, for transport to the testing laboratories; and
- Chain of custody (COC) documentation was completed for each batch of samples relinquished to the laboratory and included: sample ID; number of bottles/vials; media type; project ID; name; date; and time of relinquishment.
- Purged groundwater was collected in 50L drums and disposed into onsite wastewater systems.

## 4.2 Process (Leachate) Sampling

Process (leachate) monitoring to be completed during this quarterly monitoring period in accordance with Licence Condition 33 (Table 12), is listed below **Table 4.2**.

**Table 4.2: Process (leachate) monitoring completed**

ID	Sampled (October 2025)
Leachate Pond	
Landfill Cell 1 Riser	X Not sampled (Insufficient leachate to sample)
Landfill Cell 1 Sumps	
Landfill Cell 1 Leachate Detection Layer	

## 4.3 Laboratory Analyses

JBS&G contracted ARL/Eurofins as the primary laboratory for the required analyses, while ALS Global conducted secondary laboratory analysis for the project. The laboratories are NATA accredited for the required analyses. In addition, the laboratories were required to meet JBS&G’s internal QA/QC requirements.

The laboratory analytical suites are outlined in Tables 12 and 13 of the License (L9443/2024/1) and is summarised in **Table 4-3** and **4-4**.

**Table 4.3: Groundwater Schedule of Analysis**

ID	Schedule of Analysis
GG01A, GG02, GG03, GG04A, GG05, GG06, GG07	<p>pH, electrical conductivity, redox potential, chemical oxygen demand, nitrate-nitrogen, ammonia-nitrogen, total nitrogen, total phosphorus, total dissolved solids, total organic carbon, dissolved oxygen.</p> <p><b>Major Ions</b> (calcium, magnesium, potassium, sodium, chloride, bicarbonate and sulphate),</p> <p><b>Heavy Metals</b> (aluminium, arsenic, cadmium, chromium, copper, iron (total), lead, manganese, mercury, nickel, selenium and zinc),</p> <p><b>Organics</b> (Phenols, Polyaromatic hydrocarbons (PAH), Organochlorine pesticides (OCP), Organophosphate pesticides (OPP) (Demeton-S-Methyl, Diazinon, Dimethoate, Fenamiphos, Fenthion, Malathion and Parathion), Polychlorinated biphenyls (PCB), Atrazine, BTEX (benzene, toluene, ethylbenzene, xylenes), Total Petroleum Hydrocarbons (TPH) and Trichloroethylene/ Perchloroethylene)</p>

**Table 4.4: Leachate Ponds Schedule of Analysis**

ID	Schedule of Analysis
Landfill Cell 1 riser and sumps	pH, electrical conductivity, total soluble solids, chloride, potassium, sulfate, ammoniacal-nitrogen, nitrate-nitrogen, total nitrogen, total phosphorus, total organic carbon, chemical oxygen demand <b>Metals</b> (arsenic (total) cadmium, chromium, copper, iron (total), lead manganese, mercury, molybdenum, nickel, selenium, zinc),
Landfill Cell 1 Leachate detection layer	<b>Total Recoverable Hydrocarbons</b> <b>Monocyclic Aromatic Hydrocarbons</b> (benzene, methylbenzene, toluene, total xylenes), <b>Polycyclic Aromatic Hydrocarbons</b> (acenaphthene, anthracene, ben(a)pyrene, fluoranthene, naphthalene, pyrene), <b>Organochlorine Pesticides</b> (aldrin, chlordane (and metabolites), DDT (and metabolites), dieldrin, chlorpyrifos, hexachlorobenzene, heptachlor (and its epoxide), lindane),
Leachate Pond	<b>Organophosphate Pesticides</b> (parathion, demeton-S-methyl, maldison, diazinon, dimethoate, fenamiphos, fenthion), <b>Other</b> (atrazine, trichloroethylene (TCE), tetrachloroethylene (PCE) and polychlorinated biphenyls (total)).

## 5. Results

### 5.1 Field Observations

During monitoring, the condition of the wells and surrounding areas were noted.

Groundwater samples were generally clear to cloudy in appearance with slight organic odours and no detectable sheen.

### 5.2 Groundwater Levels & Groundwater Flow

Groundwater levels (hydraulic heads) recorded in the groundwater wells for October 2025 are presented in **Table 5-1** below.

**Table 5.1 Groundwater Elevation Results: October 2025**

Well ID	AMG (easting)	AMG (northing)	Date	TOC Elevation (m AHD)	SWL Elevation (m BTOC)	Groundwater Elevation (m AHD)	LNAPL/ DNAPL	Total Well Depth (m BTOC)
GG01	403310	6546530	27/10/2025	180.66	36.050	144.61	Nil	42.531
GG02	402820	6545834	27/10/2025	183.455	40.823	142.632	Nil	45.061
GG03	402638	6545562	27/10/2025	168.01	25.340	142.67	Nil	45.814
GG04	402127	6545628	27/10/2025	189.68	46.856	142.824	Nil	53.546
GG05	402146	6545788	27/10/2025	188.47	46.120	142.35	Nil	53.974
GG06	402411	6545560	27/10/2025	171.755	29.150	142.605	Nil	53.391
GG07	402818	6545561	27/10/2025	164.93	22.567	142.363	Nil	27.521

Groundwater flow in the Superficial aquifer in the area of the site is in a south westerly direction towards the Gingin Brook, which is approximately 5 km southwest of the site, illustrated in **Figure 3**. This is consistent with regional expectations.

Relative standing water levels ranged 142.350 m AHD (GG05) to 144.610 m AHD (GG01).

### 5.3 Groundwater Field Parameters

During purging of the wells, the groundwater field parameters were measured including electrical conductivity (EC), temperature, dissolved oxygen (DO), pH and ORP, corrected to the standard hydrogen electrode (SHE) of the YSI multi-parameter probe. Field groundwater sampling sheets are provided in **Appendix B**, field parameters are summarised below in **Table 5.2**.

**Table 5.2: Groundwater Field Parameter Results: October 2025**

Well ID	Sample Date	Dissolved Oxygen (ppm)	Temperature (°C)	pH (units)	Conductivity (µS/cm)	SHE* (mV)
GG01	28/10/2025	0.78	21.7	5.59	3333	43.1
GG02	31/10/2025	9.97	21.7	7.20	107.5	62.8
GG03	27/10/2025	1.33	23.4	6.17	928	-29.4

Well ID	Sample Date	Dissolved Oxygen (ppm)	Temperature (°C)	pH (units)	Conductivity (µS/cm)	SHE* (mV)
GG04	31/10/2025	7.72	24.1	5.52	273.5	101.9
GG05	28/10/2025	2.34	27.6	5.50	3449	65.6
GG06	28/10/2025	0.27	22.6	6.05	1435	-115.9
GG07	27/10/2025	4.37	21.8	5.53	540	138.7

\*Standardised Hydrogen Electrode calculated from field Redox Potential (+200)

Electrical conductivity (EC) ranged between 540 µS/cm (GG07) and 3449 µS/cm (GG05), and total dissolved solids (TDS) ranged between 351 mg/L and 2,242 mg/L (using a conversion factor of 0.65 at 25°C)<sup>3</sup>. Salinity ranged from fresh (< 1000 mg/L as TDS) to moderately saline (2,000 – 3,000 mg/L as TDS).

Other water quality parameters recorded at the time of sampling are summarised as follows:

- Dissolved oxygen (DO) values obtained in-situ were reported ranging from 0.27 mg/L (GG06) to 9.97 mg/L (GG02).
- Groundwater temperatures ranged between 21.7°C (GG01, GG02) and 27.6°C (GG05).
- pH values of the groundwater ranged between 5.50 (GG05) and 7.20 (GG02) pH units, indicating slightly acidic to neutral conditions.
- Standard Hydrogen Electrode (SHE) values ranged from –115.9 mV (GG06) to 138.7 mV (GG07), indicating variable redox conditions across the monitoring network.

## 5.4 Groundwater Laboratory Results

The laboratory results from groundwater samples from October 2025 and a historical summary of previous monitoring data is presented in **Appendix C**. NATA certified laboratory reports and chain of custody documentation have been included in **Appendix D**. The groundwater laboratory results are summarized below:

### Metals

- Total Iron recorded exceedances of the DOH (2025) Non-Potable Use Guidelines (NPUG) value (0.3 mg/L) in all seven wells, ranging from 1.2 mg/L (GG05) to 46 mg/L (GG01).
- Aluminium (filtered) recorded an exceedance of the ANZG (2018) Fresh Water – 99% species protection level (0.027 mg/L) in GG03 (0.05 mg/L).
- Arsenic (filtered) recorded exceedances of the ANZG (2018) Fresh Water – 99% species protection level (0.0008 mg/L) in GG01, GG03 and GG06 (0.0008 mg/L).
- Chromium (III+IV) (filtered) recorded exceedances of the ANZG (2018) Fresh Water – 99% species protection level (0.00001 mg/L) in GG01 (0.002 mg/L), GG03 (0.01 mg/L) and GG06 (0.007 mg/L).
- Copper (filtered) recorded exceedances of the ANZG (2018) Fresh Water – 99% species protection level (0.001 mg/L) in GG02 (0.021 mg/L) and GG04 (0.003 mg/L).
- Lead (filtered) recorded an exceedance of the ANZG (2018) Fresh Water – 99% species protection level (0.001 mg/L) in GG02 (0.016 mg/L).
- Zinc (filtered) recorded exceedances of the ANZG (2018) Fresh Water – 99% species protection level (0.0024 mg/L) in GG01 (0.008 mg/L), GG02 (0.054 mg/L) and GG04 (0.068 mg/L).

<sup>3</sup> W.A. Davidson, Hydrogeology and Groundwater Resources of the Perth Region Western Australia, Bulletin 142 (1995).

### **Non-Metallic Inorganics**

- Nitrate (as N) recorded exceedances of the ANZG (2018) Fresh Water – 99% species protection level (1 mg/L) in GG02 (5.1 mg/L), GG04 (4.7 mg/L) and GG07 (2.6 mg/L).

### **Major Anions**

- Chloride (filtered) recorded an exceedance of the DOH (2025) Non-Potable Use Guidelines (NPUG) value (250 mg/L) in GG01 (420 mg/L).

**The following analyte groups did not record concentrations above laboratory LOR in any analysed sample:**

- TPH
- TRH
- BTEXN
- PAH
- MAH
- Chlorinated alkanes
- Chlorinated alkenes
- Phenols
- OCP
- OPP
- Herbicides & fungicides

## 6. Quality Assurance / Quality Control

The Data Quality Indicators (DQIs) established for the project are discussed in **Section 2.1.6** and indicate conformance to specific QA/QC procedures.

### 6.1 Discussion of Groundwater QA/QC Results

The QA/QC results for the samples are summarised in **Table 6.1** below and discussed in the following section. Detailed laboratory QA/QC results are included within the laboratory reports in **Appendix D** and QA/QC tables are included in **Appendix C**.

**Table 6.1: QA/QC Results**

Data Quality Objective	Results	DQI met?
<b>Precision</b>		
Blind duplicates (intra-laboratory)	Frequency 1/7, RPD 0- 175%	Partial <sup>1</sup>
Split duplicates (inter-laboratory)	Frequency 1/7 RPD 0-175%	Partial <sup>1</sup>
Laboratory duplicates	RPD - 0% and 175%	Partial <sup>1</sup>
<b>Accuracy</b>		
Surrogate spikes	35– 145 %	Partial <sup>1</sup>
Laboratory control samples	37 – 130 %	Partial <sup>1</sup>
Matrix spikes	3 – 124 % Recovery	Partial <sup>1</sup>
<b>Representativeness</b>		
Sampling appropriate for media and analytes	All sampling conducted in accordance with JBS&G standard operating procedures	Yes
Rinsate blanks	<LOR	Yes
Method blanks	<LOR	Yes
Samples extracted and analysed within holding times.	All samples extracted and analysed within holding times	Yes
<b>Comparability</b>		
Standard operating procedures used for sample collection & handling	Consistent field staff used following JBS&G standard operating procedures.	Yes
Standard analytical methods used	Standard analytical methods used. Primary and secondary laboratories NATA accredited for all analyses.	Yes
Consistent field conditions, sampling staff and laboratory analysis	Consistent conditions and staff utilised. Analytical laboratories consistent throughout the investigation.	Yes
Limits of reporting appropriate and consistent	Limit of reporting are appropriate for the investigation	Yes
<b>Completeness</b>		

Data Quality Objective	Results	DQI met?
COCs completed	COCs completed appropriately.	Yes
Appropriate documentation	Included as Appendices of this report.	Yes
Satisfactory frequency/result for QC samples	The QC results are considered adequate for the purposes of the investigation.	Yes
Data from critical samples is considered valid	Data from critical samples is considered valid.	Yes

<sup>1</sup>See below for discussion where DQI exceeded.

### 6.1.1 Precision

An intra-laboratory (duplicate) sample and an inter-laboratory sample were analysed at a frequency of 1 in 20 samples. The RPDs of both of the intra-laboratory and inter-laboratory duplicates and their respective primary samples ranged between 0 – 175%.

While these RPD values were outside of the acceptable range (<50%), the actual differences in concentrations between the primary and quality control sample are considered small and acceptable, since most were within the same order of magnitude. The relatively low concentrations noted in **Appendix C** for both the primary and quality control samples (generally within 10 x the LOR) have resulted in exaggerated RPDs.

### 6.1.2 Accuracy

The observed laboratory matrix spike recoveries ranged from 3 – 124%, which lies outside JBS&G's preferred range of 70 – 130%. Surrogate recoveries ranged between 35 – 145%, which lies outside of JBS&G's preferred range of 70 – 130% but is still considered acceptable as it lies within the NATA accredited laboratory's recommended range of 20 – 150%.

### 6.1.3 Representativeness

All works were completed in accordance with JBS&G standard operating procedures and were appropriate for the media and analytes.

Two rinsate samples were collected following decontamination of non-disposable sampling equipment during the site works. The rinsate samples reported analytes below LOR for the sampling event.

Method blank analyses were conducted for each laboratory batch of samples. No target analytes were detected above the LOR within any of the method blanks.

The extraction and analysis of all samples was completed within the recommended holding times.

### 6.1.4 Comparability

All sampling was undertaken in accordance with JBS&G standard operating procedures with consistent conditions and staff utilised.

Standard analytical methods were used by both the primary and secondary laboratories, and all analyses were undertaken under NATA accreditation. The limits of reporting are consistent and considered appropriate for the investigation.

### 6.1.5 Completeness

Samples were transported under full chain of custody (COC) documentation. The COC documentation was completed correctly, and the selected analyses were correctly conducted. All field documentation is complete and accurate. The frequency of analysis and results for QC samples are generally appropriate.

## 6.2 QA/QC Assessment

The results of the field and laboratory QA/QC program indicate that the analytical data obtained from this assessment generally met the predetermined DQIs or, where the DQIs were exceeded, did not indicate excessive systematic sampling or analytical errors.

The described failures of DQIs above are not considered to significantly affect the quality of the data. In all case where DQIs were not fully met, the worse-case result was used for assessment purposes. The data is considered to be of adequate quality to be relied on for the purposes of assessing the environmental condition of the subject material.

## 7. Discussion

No concentrations of TPH, TRH, BTEXN, PAH, MAH, chlorinated alkanes/alkenes, phenols, OCP, OPP, herbicides or fungicides were detected above laboratory limits of reporting (LOR) in any of the analysed samples.

Total iron was identified in exceedance of NPUG at all locations, and the concentration of chloride reported at GG01 also exceeded NPUG. Exceedances of the NPUG values in groundwater are not considered to represent an unacceptable risk to human receptors, as there is no current or reasonably foreseeable abstraction of groundwater in the vicinity of the site.

Concentrations of nitrate, aluminium, arsenic, chromium, lead and zinc variably exceeded ANZG freshwater 99% guidelines across the monitoring network. Exceedances of the ANZG freshwater guideline values are also not considered significant, as there are no connected surface water receptors in the immediate area and the nearest potential discharge point is located approximately 5 km south-west of the site.

Whilst elevated concentrations of total iron (46 mg/L) and chloride (filtered) (420 mg/L) were observed in the up-gradient well GG01, concentrations across the remainder of the monitoring network are relatively consistent, with no clear spatial trends or up-gradient versus down-gradient differentiation evident. This distribution suggests that the exceedances may reflect broader regional groundwater conditions. Trend analysis will be included in future reports once sufficient data has been collected to facilitate this.

## 8. Conclusion

JBS&G was engaged by the Fernview Environmental to provide ongoing environmental support for the bioreactor landfill facility near Cullalla, approximately 100 km north of Perth, Western Australia (WA) (the site), most recently to complete compliance groundwater monitoring. The objective of the monitoring was to provide the client with groundwater monitoring data compliant with the conditions (Conditions 33, 34 and 31) of their “prescribed premise” license (Waste License No. **L9443/2024/1**).

Subject to the limitations presented in Section 9, the GME was undertaken in general accordance with the site licence conditions, with the key findings summarised below.

- Local groundwater flow in the Superficial aquifer is in a west to south-westerly direction, which reflects regional groundwater flow direction.
- Groundwater samples were collected and preserved in accordance with AS/NZS 5667.1-1998 and AS/NZS 5667.11 and analysed by NATA accredited laboratories.
- No leachate was present at each location at the time of monitoring. Leachate sampling will be undertaken once sufficient leachate has accumulated.
- Although the site licence requires trend analysis, insufficient historical groundwater data are available as; therefore, trend analysis has not been undertaken. The results will establish a baseline for future trend analysis at the site.
- Iron concentrations across all seven wells were reported above the NPUG value (0.3 mg/L) during the GME, ranging from 1.2mg/L (GG05) to 46 mg/L (GG01).
- Chloride concentrations for GG01 (420 mg/L) were reported above the NPUG value (250 mg/L) during the GME.
- Aluminium (filtered) concentrations for GG03 (0.05 mg/L) were reported above the ANZG (2018) Freshwater 99% species protection level (0.027 mg/L) during the GME.
- Arsenic (filtered) concentrations for GG01, GG03 and GG06 (0.008 mg/L) were reported above the ANZG (2018) Freshwater 99% species protection level (0.0008 mg/L) during the GME.
- Chromium (III+IV) (filtered) concentrations for GG01 (0.002 mg/L), GG03 (0.01 mg/L) and GG06 (0.007 mg/L) were reported above the ANZG (2018) Freshwater 99% species protection level (0.00001 mg/L) during the GME.
- Copper (filtered) concentrations for GG02 (0.021 mg/L) and GG04 (0.003 mg/L) were reported above the ANZG (2018) Freshwater 99% species protection level (0.001 mg/L) during the GME.
- Lead (filtered) concentrations for GG02 (0.016 mg/L) were reported above the ANZG (2018) Freshwater 99% species protection level (0.001 mg/L) during the GME.
- Nitrate (as N) concentrations for GG02 (5.1 mg/L), GG04 (4.7 mg/L) and GG07 (2.6 mg/L) were reported above the ANZG (2018) Freshwater 99% species protection level (2.4 mg/L) during the GME.
- Elevated concentrations of total iron (46 mg/L) and chloride (filtered) (420 mg/L) were observed in the up-gradient well GG01, concentrations across the remainder of the monitoring network are relatively consistent, with no clear spatial trends or up-gradient versus down-gradient differentiation evident. This distribution suggests that the exceedances may reflect broader regional groundwater conditions.
- No TPH, TRH, BTEXN, PAH, MAH, chlorinated alkanes/alkenes, phenols, OCP, OPP, herbicides or fungicides concentrations were detected above laboratory limits of reporting (LOR) in any of the analysed samples.

## 9. Limitations

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only and has been based in part on information obtained from the client and other parties. The report has been prepared specifically for the client for the purposes of the commission, and no warranties, express or implied, are offered to any third parties and no liability will be accepted for use or interpretation of this report by any third party.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose. This report should not be amended in any way without prior approval by JBS&G, or reproduced other than in full including all attachments as originally provided to the client by JBS&G.

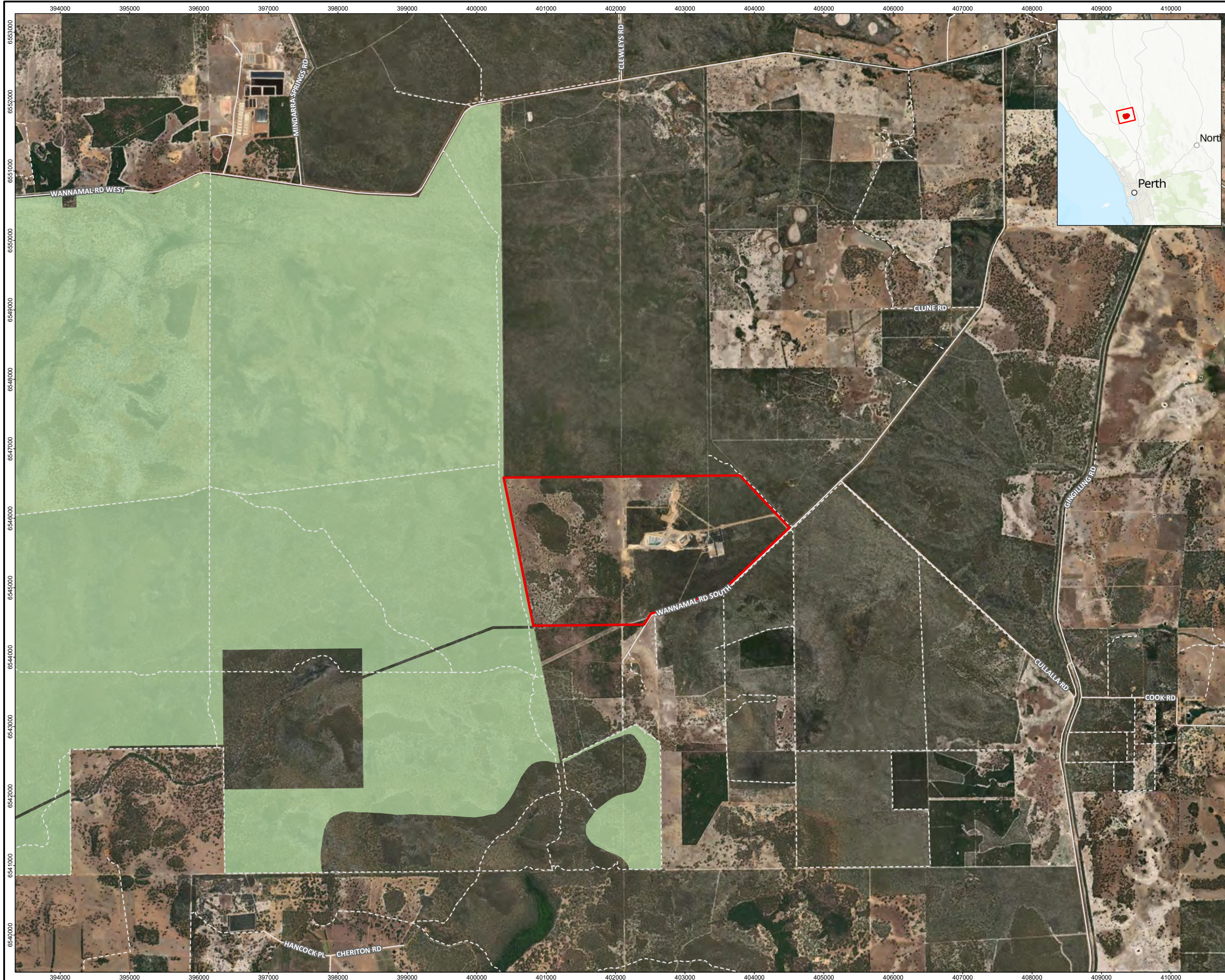
Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements or agreed scope of work.

Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. Conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.

Changes to the conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G reserves the right to review the report in the context of the additional information.

## Figures

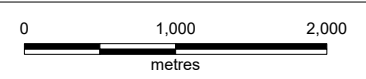


- Legend**
- Site Boundary
  - Boonanarring Nature Reserve
  - Roads (LGATE-195)
    - Major road
    - Minor road
    - Track



Job No: 7012101  
 Client: Fernview Environmental  
 Version: RevA      Date: 10-Feb-2026  
 Drawn By: jcrute      Checked By: JN

Scale 1:50,000 at A3



Coord. Sys. GDA2020 MGA Zone 50

**Lot 98 Wannamal Road  
 South CULLALLA WA 6503**

**SITE LOCATION**

**FIGURE 1**

File Name: C:\Users\jcrute\JBS&G Australia\DCS - Internal - V2\Projects\Fernview Environmental\70121 Lot 98 Wannamal Road\GIS\02\_MapProjects\7012101\_WannamalRd\_Nov25AnnualReport\_RevA.aprx  
 Image Reference: World Imagery: Vantor  
 World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community  
 World Hillshade: Esri, USGS

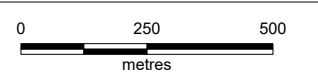


- Legend**
- Site Boundary
  - Cadastre
  - Site Feature
  - Landfill Plot
  - Cell 1
  - Pond
  - Roads (LGATE-195)
  - Minor road
  - Track
  - + Groundwater Well



Job No: 7012101  
 Client: Fernview Environmental  
 Version: RevA      Date: 16-Jan-2026  
 Drawn By: forleo      Checked By: JN

Scale 1:15,000 at A3



Coord. Sys. GDA2020 MGA Zone 54

**Lot 98 Wannamal Road  
 South CULLALLA WA 6503**

**SITE LAYOUT**

**FIGURE 2**

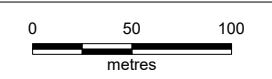


- Legend**
- Site Boundary
  - Site Feature**
  - Landfill Plot
  - Cell 1
  - Pond
  - Inferred groundwater flow direction
  - Groundwater contours
  - + Groundwater Well
  - 0.74 Groundwater level (mAHD)



Job No: 7012101  
 Client: Fernview Environmental  
 Version: RevA      Date: 30-Jan-2026  
 Drawn By: droberts      Checked By: JN

Scale 1:3,800 at A3 ↑



Coord. Sys. GDA2020 MGA Zone 50

**Lot 98 Wannamal Road  
 South CULLALLA WA 6503**

**GROUNDWATER CONTOURS**

**FIGURE 3**

## Appendix A Site Waste Licence



<b>Licence number</b>	L9443/2024/1
<b>Licence holder</b>	Fernview Environmental Pty Ltd
<b>ACN</b>	617 674 469
<b>Registered business address</b>	Unit 1, 48 Kelvin Road MADDINGTON WA 6109
<b>DWER file number</b>	DER2024/000264
<b>Duration</b>	19/11/2024 to 19/11/2044
<b>Date of issue</b>	19/11/2024
<b>Premises details</b>	Fernview Landfill Lot 98 Wannamal Road South CULLALLA WA 6503  Legal description - Lot 98 on Plan 75926 Certificate of Title Volume 2847 Folio 974 As defined by the coordinates in Schedule 1 of the Licence

<b>Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)</b>	<b>Assessed design capacity</b>
Category 64: Class II or III putrescible landfill site: premises (other than clean fill premises) on which waste of a type permitted for disposal for this category of prescribed premises, in accordance with the <i>Landfill Waste Classification and Waste Definitions 1996</i> , is accepted for burial.	150,000 tonnes per annual period

This licence is granted to the licence holder, subject to the attached conditions, on 19 November 2024, by:

**Grace Heydon**  
**MANAGER WASTE INDUSTRIES**

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

[L9443/2024/1 \(19/11/2024\)](#)

## Licence history

Date	Reference number	Summary of changes
19/11/2024	L9443/2024/1	Licence granted.

## Interpretation

In this licence:

- (a) the words ‘including’, ‘includes’ and ‘include’ in conditions mean “including but not limited to”, and similar, as appropriate;
- (b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (c) where tables are used in a condition, each row in a table constitutes a separate condition;
- (d) any reference to an Australian or other standard, guideline, or code of practice in this licence:
  - (i) if dated, refers to that particular version; and
  - (ii) if not dated, refers to the latest version and therefore may be subject to change over time;
- (e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and
- (f) unless specified otherwise, all definitions are in accordance with the EP Act.

**NOTE:** This licence requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this licence.

## Licence conditions

The licence holder must ensure that the following conditions are complied with:

### Infrastructure and equipment

- The licence holder must ensure that the site infrastructure and equipment listed in Table 1 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 1.

**Table 1: Infrastructure and equipment requirements**

Site infrastructure and equipment	Operational requirement	Infrastructure location
Landfill Cell 1	a) The landfill cell liner must be maintained in good condition, free from leaks and defects.	As shown in Schedule 1, Figures 1 and 2
Leachate collection, extraction and recirculation system	a) All leachate pipes, gravity feeds and pumps must be free of blockage, leaks and defects; b) All leachate sumps must be maintained free of leaks and defects. c) All leachate removed from the leachate sumps must be directed to the leachate pond or recirculated onto the landfill surface. d) A leachate head of less than 300 mm must be maintained above the landfill base liner system. e) Probes must be operational to identify variations in leachate head levels. f) Recirculation system must be maintained to ensure correct operation in the conveyance of leachate to active landfill cells for recirculation. g) The leachate detection system must be capable of directing leachate leakage from the entire area of the Cell 1 Landfill footprint to the monitoring point where it can be monitored and extracted.	As shown in Schedule 1, Figures 5, 6 and 7
Leachate Pond	a) Leachate pond liner must be maintained in good condition, free from leaks and defects. b) A 1000 mm freeboard must be maintained at all times. c) The pond must not overtop. d) Probes must be operational to identify high leachate levels. e) Leachate is not to be used for any purpose on the premises other than recirculation back onto the landfill to assist with waste decomposition.	As shown in Schedule 1, Figures 2 and 4
Stormwater management system	a) The surface water management system must be maintained to prevent stormwater	As shown in Schedule 1, Figure 4

Site infrastructure and equipment	Operational requirement	Infrastructure location
	runoff from becoming contaminated by waste on the premises.	(Sediment Pond and associated drains)
Fuel storage tank	<ul style="list-style-type: none"> <li>a) Must be labelled with appropriate placards.</li> <li>b) Must be self-bunded.</li> <li>c) Must hold a maximum of 60,000 L of fuel.</li> <li>d) All fuel lines must have the option to be switched off.</li> <li>e) Areas around the tank to be kept clean and free of waste build-up.</li> </ul>	As shown in Schedule 1, Figure 3
150,000 L water tank for reticulation and dust suppression	<ul style="list-style-type: none"> <li>a) Must be readily accessible, clearly signposted and in good condition.</li> </ul>	As shown in Schedule 1, Figure 1 and Figure 3
100,000 L firefighting water storage tank	<ul style="list-style-type: none"> <li>a) Must be readily accessible, clearly signposted and in good condition.</li> </ul>	As shown in Schedule 1, Figure 1 and Figure 3
Portable fire extinguishers	<ul style="list-style-type: none"> <li>a) Must be readily accessible, clearly signposted and in good condition.</li> <li>b) Must be provided at the locations shown in Figure 2 of Schedule 1.</li> <li>c) Must be provided in all plant and equipment and personnel vehicles.</li> </ul>	As shown in Schedule 1, Figure 3
Quick response fire unit (vehicle mounted)	<ul style="list-style-type: none"> <li>a) Must have a minimum of 1,000 L water with operational pump and 20 m of 19 mm diameter (minimum) hose.</li> <li>b) Must be kept in close proximity to any work areas on the site.</li> </ul>	Within the prescribed premises boundary as shown in Schedule 1, Figure 1
Water truck	<ul style="list-style-type: none"> <li>a) Must always be available on the premises for dust suppression or firefighting where required.</li> <li>b) Must be able to carry a minimum of 14,000 L of water.</li> <li>c) Must be fitted with 200 L firefighting foam injection systems with remote control cannon.</li> </ul>	Within the prescribed premises boundary as shown in Schedule 1, Figure 1
Firebreak	<ul style="list-style-type: none"> <li>a) To be maintained around the boundary of the premises, to a width of 3 metres.</li> </ul>	As shown in Schedule 1, Figure 3
Wheel cleaning facility	<ul style="list-style-type: none"> <li>a) To be maintained in good condition to effectively remove dirt from the wheels of vehicles exiting the premises.</li> </ul>	As shown in Schedule 1, Figure 2
Site perimeter fencing	<ul style="list-style-type: none"> <li>a) Must be maintained in good condition, at a minimum of 1.8 m high, to prevent the entry of fauna and feral animals onto the premises.</li> <li>b) Entrance gates to the premises must be securely locked when the premises is unattended to prevent unauthorised access.</li> </ul>	As shown in Schedule 1, Figure 1
Signage	Clearly displays the following information:	At the site entrance

Site infrastructure and equipment	Operational requirement	Infrastructure location
	a) hours of operation; b) contact phone number for information and complaints or notification of fires; c) a list of materials that are accepted; d) the types of waste that must not be deposited on the premises and a contact telephone number for alternative disposal options; and e) a warning, indicating penalties for people lighting fires.	
Groundwater monitoring wells	c) Seven (7) groundwater monitoring wells at the landfill site, designated GG1, GG2, GG3, GG4, GG5, GG6, GGN7 maintained in good working order to allow representative samples to be collected.	As shown in Schedule 1, Figure 9

## Waste Acceptance

2. The licence holder must only accept onto the premises waste of a type that:
- (a) does not exceed the rate at which that waste is received; and
  - (b) meets the relevant acceptance specification, as set out in Table 2.

**Table 2: Waste acceptance criteria**

Waste type	Rate at which waste is received	Acceptance specification <sup>1</sup>
Clean Fill	Combined 150,000 tonnes per annual period.	None specified
Inert Waste Type 1		Waste containing visible asbestos or ACM shall not be accepted.
Inert Waste Type 2		Plastics only. Tyres shall not be accepted.
Putrescible Waste		None specified.
Special Waste Type 2		None specified.
Contaminated Solid Waste		Must meet the Acceptance Criteria for Class II landfills and be supported by documentation that demonstrates compliance with these Acceptance Criteria.

Note 1: Additional requirements for the acceptance of controlled waste (including tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.

3. The licence holder must ensure that where waste does not meet the waste acceptance criteria set out in condition 2, it is removed from the premises by the delivery vehicle or, where that is not possible, stored in a quarantine storage area or container and removed to an appropriately authorised facility within 14 days of receipt.

## Operational controls

### Waste processing

4. The licence holder must ensure that the waste types specified in Table 3 are only subjected to the corresponding processes, subject to the corresponding process limits and/or specifications.

**Table 3: Waste processing**

	Waste Type	Processes	Process limits and/or specifications
1.	Soft wastes accepted for landfilling	Disposal of first layer of waste by landfilling	<ul style="list-style-type: none"> <li>a) All solid waste materials delivered to the premises must be contained in a covered vehicle and only unloaded within the active cell and within the vicinity of the tipping face.</li> <li>b) Landfilling must only occur in Landfill Cell 1 as depicted in Figure 1.</li> <li>c) Prior to any placement of waste, a new layer of non-woven and needle punched separation geotextile is to be progressively installed over, and in contact with, the Landfill Cell 1 leachate aggregate layer in accordance with Figure 8.</li> <li>d) The tipping area must be maintained no wider than 30 metres and no higher than two (2) metres in vertical height;</li> <li>e) Only landfilling of soft waste is to occur.</li> <li>f) Waste must be placed as a full 2 m layer in one lift.</li> </ul>
2.	All waste types accepted for landfilling	Acceptance and disposal of waste by landfilling (subsequent layers)	<ul style="list-style-type: none"> <li>a) All solid waste materials delivered to the premises must be contained in a covered vehicle and only unloaded within the active cell and within the vicinity of the tipping face.</li> <li>b) The licence holder must manage the landfilling activities within the active Class II putrescible landfill by: <ul style="list-style-type: none"> <li>(i) only disposing of waste by landfilling within a defined tipping area in Landfill Cell 1;</li> <li>(ii) ensuring that temporary batters within the waste materials do not exceed slopes of 1V:3H;</li> <li>(iii) ensuring that at every 10 m in vertical height of waste placement, the next lift is set back 5 m to create a bench;</li> <li>(i) ensuring that no waste is temporarily stored or landfilled within 35 m from the boundary of the premises;</li> <li>(ii) ensuring that highly odourous waste is disposed of by burial immediately following acceptance;</li> </ul> </li> </ul>

	Waste Type	Processes	Process limits and/or specifications
			<ul style="list-style-type: none"> <li>(iii) ensuring earthen bunding and surface grading are maintained to direct stormwater away from the tipping area;</li> <li>(iv) maintaining the tipping area no wider than 30 metres and no higher than two (2) metres in vertical height;</li> <li>(v) compacting waste layers to not more than 500 mm thick as soon as is practicable after placement of waste, and not later than at the end of each working day;</li> <li>(vi) covering the waste in accordance with the requirements of condition 5;</li> <li>(vii) ensuring that daily cover and intermediate cover is removed prior to recommencing landfilling;</li> <li>(viii) stockpiling sufficient cover material to allow waste to be covered in accordance with condition 5 and to cover exposed combustible waste in the event of a fire.</li> </ul>
3.	Special Waste Type 2	Acceptance and disposal of waste by landfilling (subsequent layers)	<ul style="list-style-type: none"> <li>a) The licence holder or their representative, must complete and sign the original controlled waste tracking form, noting, in writing, any discrepancies between waste declared and waste received.</li> <li>b) The licence holder must keep a record of the controlled waste tracking form for at least three years.</li> <li>c) The licence holder must restrict access to the landfill site where the waste is buried to authorised personnel only.</li> </ul>
4.	Inert Waste Type 1	Receipt, handling and storage prior to disposal	<ul style="list-style-type: none"> <li>a) Crushing and screening of waste is not permitted.</li> </ul>

5. The licence holder must ensure that cover is applied and maintained on landfilled waste types in accordance with the corresponding cover requirements in Table 4 and that sufficient stockpiles of cover are maintained on the premises at all times to meet the requirements of this condition.

**Table 4: Daily cover requirements**

Waste Type	Material	Depth/specifications	Timescales
Clean fill	No cover required		
Inert Waste Type 1			
Putrescible waste Contaminated solid	Inert Waste Type 1, clean fill	150 mm	As soon as practicable and not later than the end of the working day that the waste was

Waste Type	Material	Depth/specifications	Timescales
waste	or soil		deposited.
		300 mm and graded at a minimum slope of 2% away from the landfill active face.	As soon as practicable where surfaces will be exposed for 90 days or more
Inert Waste Type 2	Inert Waste Type 1, clean fill or soil	300 mm	As soon as practicable after acceptance and no later than the end of the working day that the waste was accepted

## Emissions and discharges

### Fire management

6. The licence holder must notify the CEO of the following as soon as practicable, but no later than 7 days after the event of:
  - (a) any fire on the premises; and/or
  - (b) any accident, malfunction, or emergency which results or could result in the discharge of firefighting wash-water or other wastes from the premises.
7. The licence holder must ensure that:
  - (a) firefighting equipment and systems are in good working order and capable of controlling and extinguishing a waste material fire within the premises;
  - (b) any unauthorised fire on the premises is extinguished as soon as possible;
  - (c) all accumulated and recoverable fire wash-water and other waste that may result from firefighting on the premises is collected and removed within 24-hours of a fire event;
  - (d) any firefighting wash-water is removed without delay by a carrier licensed under the *Environmental Protection (Controlled Waste) Regulations 2004* or placed into the onsite leachate pond; and
  - (e) all fire impacted waste is disposed of into Landfill Cell 1.

### Dust emissions

8. The licence holder must ensure that no visible dust crosses the premises boundary
9. The licence holder must restrict vehicle speeds to less than 30 km/hr on the premises.
10. The licence holder must manage fugitive dust emissions from the active tipping area during operational hours by:
  - (a) applying water;
  - (c) ensuring waste is levelled and compacted as soon as practicable after it is discharged and at a minimum at the end of the working day; and
  - (d) ensuring waste is placed and compacted to ensure all faces are stable and capable of retaining further waste placement or placement of cover or rehabilitation material.
11. All operational vehicles must pass through the wheel cleaning facility prior to exiting the premises.

## Department of Water and Environmental Regulation

### Discharges to land and water

12. The licence holder must immediately recover, or remove and dispose of, spills of environmentally hazardous materials including fuel, oil, or other hydrocarbons, whether inside or outside an engineered containment system.
13. The licence holder must ensure that all material used for the recovery, removal, and/or disposal of environmentally hazardous materials is stored in an impermeable container prior to disposal to a suitably licensed premises.

### Windblown waste

14. The licence holder must ensure that windblown waste is contained within the boundary of the premises and that windblown waste is returned to the tipping area on at least a weekly basis.
15. The licence holder must operate and maintain a minimum of six (6) portable litter control screens with a minimum height of 4 m and minimum length of 5 m, located within 15 m downwind of the working face of the landfill.

### Odour

16. The licence holder must ensure that odour emitted from the premises does not unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person who is not on the premises.
17. The licence holder shall prepare, maintain and implement an Odour Management Plan for the premises that sets out:
  - (a) the identification of odour sources within the premises;
  - (b) how odour emissions will be mitigated from the identified sources;
  - (c) the identification of procedures to support the mitigation of odour emissions;
  - (d) details of engineered controls to support the mitigation of odour emissions;
  - (e) site inspections to be undertaken to identify unreasonable sources of odour; and
  - (f) measures to be undertaken if unreasonable odour emissions are detected outside of the prescribed premises boundary.
18. The licence holder must submit to the CEO the Odour Management Plan prepared pursuant to condition 17 by 30 June 2025.

### Noise

19. All vehicles entering the premises and within the licence holder's control must be fitted with broadband reversing alarms.
20. The licence holder must ensure that waste is not accepted at the premises outside of the hours of 7:00 to 17:00 Monday to Friday, and 7:00 to 16:00 on Saturdays and Public Holidays.

### Vermin/pests

21. The licence holder must implement the following feral animal, vermin and weed management measures:
  - (a) check and record the integrity of the premises boundary fence on a weekly basis and undertake repairs within 1 week of any damage being identified;
  - (b) undertake vermin prevention measures including baiting and trapping; and

## Department of Water and Environmental Regulation

- (c) inspect the premises monthly for the presence of weeds, record visible observations of the inspections and take and record measures to prevent the spread and growth of weeds.

## Specified actions

- 22.** The licence holder must submit to the CEO the information in Table 5 in accordance with the requirements and timescale outlined in Table 5.

**Table 5: Specified actions**

	Information	Requirements	Timescale
1.	Capping Plan	The licence holder must prepare and submit a Capping Plan for Landfill Cell 1 to the CEO which includes details on: <ul style="list-style-type: none"> <li>a) the design;</li> <li>b) material specifications;</li> <li>c) landfill gas collection;</li> <li>d) current and finished survey levels; and</li> <li>e) construction quality assurance planning.</li> </ul>	3 months prior to completion of waste disposal in Landfill Cell 1
2.	Landfill Gas Management Plan	The licence holder shall prepare and submit to the CEO a Landfill Gas Management Plan which includes: <ul style="list-style-type: none"> <li>a) a detailed description and drawings/layout plans of the proposed active landfill gas extraction and management system;</li> <li>b) installation procedures;</li> <li>c) installation timeline;</li> <li>d) monitoring procedures; and</li> <li>e) maintenance procedures.</li> </ul>	30 November 2026

## Monitoring

### General monitoring

- 23.** The licence holder shall ensure that:
- (a) All liquid samples are collected and preserved in accordance with AS/NZS 5667.1;
  - (b) All surface water sampling is conducted in accordance with AS/NZS 5667.4;
  - (c) All groundwater sampling is conducted in accordance with AS/NZS 5667.11;
  - (d) All laboratory samples are submitted to and tested by a laboratory with NATA accreditation for the parameters being measured unless indicated otherwise within the relevant table.
- 24.** The licence holder must ensure that all monitoring equipment used on the premises to comply with the conditions of this licence is maintained and calibrated in

accordance with the manufacturer’s specifications.

- 25. The licence holder must, where the requirements of calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.
- 26. The licence holder must ensure that:
  - (a) monthly monitoring is undertaken at least 15 days apart;
  - (b) quarterly monitoring is undertaken at least 2 months apart; and
  - (c) annual monitoring is undertaken at least 9 months apart.

**Input and output monitoring**

- 27. The licence holder must record the total amount of waste accepted onto the premises, for each waste type listed in Table 6, in the corresponding unit, and for each corresponding time period, as set out in Table 6.

**Table 6: Waste accepted onto the premises**

Waste Type	Units	Time Period
Waste accepted in accordance with Table 2	Tonnes	Each load arriving at the premises

- 28. The licence holder must record the total amount of waste removed from the premises, for each waste type listed in Table 7, in the corresponding unit, and for each corresponding time period set out in Table 7.

**Table 7: Waste removed from the premises**

Waste Type	Units	Time Period
Waste type as defined in the Landfill Definitions	Tonnes	Each load rejected or removed from the premises

**Stormwater management monitoring**

- 29. The licence holder must monitor and record, at a minimum, the parameters specified in Table 8 at the frequency specified in Table 8, and record any management actions undertaken to ensure compliance with condition 1.

**Table 8: Stormwater management system monitoring requirement**

	Monitoring actions	Parameter/unit	Frequency/Recording period
1.	Check for the presence of erosion around Landfill Cell 1 and stormwater management structures	Observation of site conditions and signs and location of erosion	Weekly/following rainfall
2.	Check vegetation for signs of deterioration due to surface water flow paths	Observation of vegetation condition	Weekly/following rainfall
3.	Monitor water levels within the stormwater pond	Water levels in the stormwater pond (m AHD)	Monthly

### Leachate Management System monitoring

30. The licence holder must inspect and monitor the leachate management system to monitor leachate levels in all ponds and sumps and manage movement of leachate between sumps and ponds and the recirculation system. The licence holder must monitor and record, at a minimum, the parameters specified in Table 9 at the locations, levels and recording frequency specified in Table 9.

**Table 9: Leachate Management System monitoring requirements**

Parameter	Location	Requirements	Frequency/Recording period
Base of monitoring point (m AHD)	Level base of leachate sumps and base formation of the landfill	To be conducted prior to the operation of the landfill	Once prior to operation of landfill
Depth of freeboard (mm)	Leachate Pond	N/A	Weekly
Depth of leachate (m AHD)	Landfill Cell 1 leachate detection layer at the base of the landfill	To be conducted when leachate levels are representative of those within the landfill and not during leachate pumping	Weekly
	Landfill Cell 1 riser and sump	To be conducted when leachate levels are representative of those within the landfill and not during leachate pumping	Weekly
Volume of leachate (m <sup>3</sup> )	Pumped out of Landfill Cell 1 sump	N/A	Weekly
Volume of leachate (m <sup>3</sup> )	Extracted from the leachate detection layer of Landfill Cell 1	N/A	Weekly
Volume of leachate added to Landfill Cell 1 (m <sup>3</sup> )	Recirculated from Leachate Pond	N/A	weekly
Volume of leachate added to Landfill Cell 1 (m <sup>3</sup> )	Recirculated from Landfill Cell 1 sump	N/A	weekly
Volume of leachate removed offsite (m <sup>3</sup> )	Pumped out of leachate pond or extracted from the leachate detection layer of Landfill Cell 1	Any leachate extracted that cannot be used for recirculation is to be tankered offsite.	Each time leachate is removed offsite

## Department of Water and Environmental Regulation

31. The licence holder must maintain the leachate operational levels in Table 10 according to the specifications in that table.

**Table 10: Leachate operational levels**

Location	Parameter	Operational level	Averaging period
Base of Landfill Cell 1 liner	Leachate head in Landfill Cell 1	Level of less than or equivalent to 300 mm	Monthly
Leachate pond	Freeboard	Greater than or equal to 1000 mm	Instantaneous

32. In case of an occurrence of a Reportable Event at a corresponding reference point as specified in Table 11, the licence holder must take the relevant management action as specified in Table 11.

**Table 11: Management actions**

Location	Event	Management action
Base of Landfill Cell 1 liner	Any time the leachate head exceeds the operational level in Table 10 for a duration of longer than 24 hours.	(a) The licence holder must investigate the cause of the exceedance within 24-hours. (b) Where the investigation identifies failure or blockage of the leachate management system, the licence holder must remove leachate from the system via a licensed liquid waste transport carrier to a licensed liquid waste facility within 48-hours of observing the exceedance. (c) The licence holder must report the exceedance and results of the investigation including proposed resolution to the CEO within 7 days.
Leachate pond	Any time the freeboard is less than the operational level in Table 10 for a duration of longer than 24-hours.	

**Leachate quality monitoring**

33. The licence holder must undertake the process monitoring at the monitoring point reference locations specified in Table 12 according to the corresponding specifications.

**Table 12: Leachate quality monitoring**

Monitoring location	Parameter	Units	Frequency	Method
Leachate Pond	Visual appearance: colour, turbidity, free phase hydrocarbons and foaming	N/A	quarterly	N/A
Landfill Cell 1 riser and sumps	pH <sup>1</sup>	pH units	quarterly	Spot sample in accordance with Condition 23
	Electrical conductivity <sup>1</sup>	µS/cm		
Landfill Cell 1 Leachate detection	Total soluble solids	mg/L		
	Cations and anions –			

Monitoring location	Parameter	Units	Frequency	Method
layer  Leachate Pond	Potassium, chloride and sulfate			
	Total metals – arsenic (total) cadmium, chromium, copper, iron (total), lead manganese, mercury, molybdenum, nickel, selenium, zinc			
	Nutrients – Ammoniacal nitrogen, nitrate-nitrogen, total nitrogen, total phosphorus, total organic carbon, chemical oxygen demand			
	Total recoverable hydrocarbons Monocyclic aromatic hydrocarbons – benzene, toluene, methylbenzene, xylene (total) Polycyclic aromatic hydrocarbons – acenaphthene, anthracene, ben(a)pyrene, fluoranthene, naphthalene, pyrene Organochlorine pesticides – Aldrin, chlordane (and metabolites), DDT (and metabolites), dieldrin, chlorpyrifos, HCB, heptachlor (and its epoxide), lindane Organophosphates – parathion, demeton-S-methyl, maldison, diazinon, dimethoate, fenamiphos, fenthion Other – atrazine, TCE, PCE and polychlorinated biphenyls (total)	µg/L	quarterly	Spot sample in accordance with Condition 23

Note 1: In-field non-NATA accredited analysis permitted

**Groundwater and surface water monitoring**

34. The licence holder must monitor groundwater quality in accordance with Table 13.

**Table 13: Groundwater quality monitoring**

Monitoring location	Parameter	Unit	Frequency	Averaging period
Monitoring wells as shown in Figure 9, Schedule 1  Stormwater	Standing water level <sup>1</sup>	m(AHD)	Quarterly	Spot sample, in accordance with condition 23
	pH <sup>1</sup>	pH unit		
	Electrical conductivity <sup>1</sup>	µS/cm		
	Redox potential <sup>1</sup>	Eh		
	Chemical oxygen demand	mg/L		
	Nitrate-nitrogen			
Ammonia-nitrogen				

Department of Water and Environmental Regulation

pond (when flowing) as shown in Figure 4, Schedule 1	Total nitrogen			
	Total phosphorus			
	Total dissolved solids			
	Total organic carbon			
	Dissolved oxygen <sup>1</sup>			
	Major cations and anions: calcium, magnesium, potassium, sodium, chloride, bicarbonate and sulphate			
	Heavy Metals: Aluminium, Arsenic, Cadmium, Chromium, Copper, Iron (total) Lead, Manganese, Mercury, Nickel, Selenium and Zinc			
Organics: Phenols, Polyaromatic hydrocarbons (PAH), Organochlorine pesticides, Organophosphate pesticides (Demeton-S-Methyl, Diazinon, Dimethoate, Fenamiphos, Fenthion, Malathion and Parathion), Polychlorinated biphenyls (PCB), Atrazine, BTEX (benzene, toluene, ethylbenzene, xylens), Total Petroleum Hydrocarbons and Trichloroethylene/ Perchloroethylene	mg/L	Six monthly	Spot sample, in accordance with condition 23	

Note 1: In-field non-NATA accredited analysis permitted

- 35.** The licence holder must adhere to the following field quality assurance and quality control procedures, as specified in Schedule B2 of the Assessment of Site Contamination NEPM, and must include as a minimum:
- (a) decontamination procedures for the cleaning of tools and sampling equipment before sampling and between samples;
  - (b) field instrument calibration for instruments used on site;
  - (c) blind replicate samples and rinsate blanks must be collected in the field and sent to the primary laboratory to determine the precision of the field sampling and laboratory analytical program;
  - (d) completed field monitoring sheets / sampling logs for each sample collected, showing:
    - (i) time of collection;
    - (ii) location of collection;
    - (iii) initials of sampler;
    - (iv) sampling method;
    - (v) field analysis results for electrical conductivity, dissolved oxygen, temperature, redox potential and pH;
    - (vi) duplicate type / location (if relevant); and
    - (vii) site observations and weather conditions, and
  - (e) chain-of-custody documentation must be completed which details the following information:
    - (i) site identification;
    - (ii) the sampler;
    - (iii) nature of the sample;

## Department of Water and Environmental Regulation

- (iv) collection time and date;
  - (v) analyses to be performed;
  - (vi) sample preservation method;
  - (vii) departure time from site;
  - (viii) dispatch courier(s); and
  - (ix) arrival time at the laboratory.
- 36.** All sample analysis must be undertaken by laboratories with current accreditation from the National Association of Testing Authorities (NATA) for the relevant parameters, unless otherwise specified in Table 13.

## Records and reporting

### Waste acceptance reporting

- 37.** The licence holder must:
- (a) maintain a waste acceptance register which ensures that a record is made of:
    - (i) the time and date of each waste delivery;
    - (ii) the name and licence number of the carrier;
    - (iii) the weight of the waste;
    - (iv) a detailed description of the type of waste;
    - (v) the determination of the waste type as defined in condition 2;
    - (vi) all supporting documentation related to waste acceptance and classification;
    - (vii) any loads of waste rejected from the premises; and
    - (viii) the amount of landfill levy payable in respect of the waste.
  - (b) Maintain a register of Special Waste Type 2 disposed of at the premises which must include:
    - (i) a plan showing the position of Special Waste Type 2 disposed of at the premises;
    - (ii) the date of the deposit
    - (iii) the name of the person that deposited the waste; and
    - (iv) for the annual period make these registers available on request.

### Complaints reporting

- 38.** The licence holder must record the following information in relation to complaints received by the licence holder (whether received directly from a complainant or forwarded to them by the Department or another party) about any alleged emissions from the premises:
- (a) the name and contact details of the complainant, (if provided);
  - (b) the time and date of the complaint;
  - (c) the complete details of the complaint and any other concerns or other issues raised; and

- (d) the complete details and dates of any action taken by the licence holder to investigate or respond to any complaint.

**Compliance reporting**

- 39. The licence holder must maintain accurate and auditable books including the following records, information, reports, and data required by this licence:
  - (a) the calculation of fees payable in respect of this licence;
  - (b) any maintenance of infrastructure that is performed in the course of complying with conditions 1 and 21 of this licence;
  - (c) monitoring programmes undertaken in accordance with conditions 27, 28, 29, 30, 32, 33, and 34 of this licence; and
  - (d) complaints received under condition 38 of this licence.
- 40. The books specified under condition 39 must:
  - (a) be legible;
  - (b) if amended, be amended in such a way that the original version(s) and any subsequent amendments remain legible and are capable of retrieval;
  - (c) be retained by the licence holder for the duration of the licence; and
  - (d) be available to be produced to an inspector or the CEO as required.
- 41. The licence holder must:
  - (a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period, and
  - (b) prepare and submit to the CEO an Annual Audit Compliance Report in the approved form by 31 March each year.
- 42. The licence holder must:
  - (a) prepare an Environmental Report that provides information in accordance with Table 14 for the preceding annual period, and
  - (b) submit that Environmental Report to the CEO by 31 March each year.

**Table 14: Environmental reporting requirements**

Condition	Requirement
-	Summary of the active landfill area and special waste disposal area that includes: <ul style="list-style-type: none"> <li>(a) areas that have been subject to waste deposition for the annual period;</li> <li>(b) remaining void capacity for waste deposition in Landfill Cell 1 at the end of the annual period; and</li> <li>(c) summary to any alterations to cell rehabilitation sequencing and timing.</li> </ul>
6	A summary of all fire incidents that have occurred during the annual period.
27,28	Tonnage of wastes accepted/rejected for each waste type during the annual period in table format.

Condition	Requirement
29	A summary of monitoring undertaken in relation to the stormwater management system, including data/observations in a table format for the annual period.
30-33	<p>A summary of leachate monitoring undertaken, including monitoring data in a table format for the annual period.</p> <p>A summary of action taken within the annual period to address exceedances of the leachate operational levels.</p>
34,35, and 36	<p>A groundwater and surface water monitoring report demonstrating compliance with conditions 34, 35, and 36, which includes:</p> <ul style="list-style-type: none"> <li>a) a clear statement of the scope of work carried out;</li> <li>b) a description of the field methodologies employed;</li> <li>c) a summary of the field and laboratory quality assurance/quality control (QA/QC) program;</li> <li>d) copies of the field monitoring records and field QA/QC documentation;</li> <li>e) an assessment of reliability of field procedures and laboratory results;</li> <li>f) a tabulated summary of results, as well as the raw data provided in an accompanying Microsoft Excel spreadsheet digital document/file (or a compatible equivalent digital document/file), with all results being clearly referenced to laboratory certificates of analysis;</li> <li>g) a diagram with aerial image overlay showing all monitoring locations;</li> <li>h) an interpretive summary and assessment of the results against relevant assessment levels for water, as published in the <i>Guideline: Assessment and management of contaminates sites</i>;</li> <li>i) an interpretive summary and assessment of results against previous monitoring results;</li> <li>j) trend graphs to provide graphical representation of historical results and to support the interpretive summary.</li> </ul>
37	Plan of disposal locations for Special Waste Type 2
38	Complaints summary for the annual period

## Definitions

In this licence, the terms in Table 15 have the meanings defined.

**Table 15: Definitions**

Term	Definition
Acceptance Criteria	Has the same meaning given to that term under the Landfill Waste Classification and Waste Definitions 1996
ACM	means asbestos containing material as defined in the Department of Health 2009, Guidelines for Assessment, Remediation and Management of Asbestos Contaminated Sites, Western Australia.
ACN	Australian Company Number
Active Landfill Area	The active waste disposal area in Landfill Cell 1 where waste is required to be deposited to achieve final waste contours.
AHD	Means the Australian Height Datum
Annual Audit Compliance Report (AACR)	means a report submitted in a format approved by the CEO (relevant guidelines and templates are available on the Department's website).
annual period	a 12 month period commencing from 1 January until 31 December of the same year.
AS/NZS5667.1	means the Australian Standard AS/NZS 5667.1 Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples.
AS/NZS 5667.4	means the Australian Standard AS/NZS 5667.4 Water Quality – Sampling – Guidance on sampling from lakes, natural and man-made
AS/NZS5667.11	means the Australian Standard AS/NZS 5667.11 Water Quality – Sampling – Guidance on sampling of groundwaters.
Assessment of Site Contamination NEPM	means the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended from time to time.
Averaging Period	means the time over which a limit is measured or a monitoring result is obtained.
books	has the same meaning given to that term under the EP Act.

Term	Definition
CEO	means Chief Executive Officer of the department. “submit to / notify the CEO” (or similar), means either: Director General Department administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 Joondalup DC WA 6919 or: <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
Contaminated Solid Waste	Means a solid waste that contains contaminants that meets the solid waste acceptance requirements of Table 2, Condition 2
department; DWER	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
discharge	has the same meaning given to that term under the EP Act.
emission	has the same meaning given to that term under the EP Act.
EP Act	<i>Environmental Protection Act 1986</i> (WA)
EP Regulations	<i>Environmental Protection Regulations 1987</i> (WA)
Highly Odorous Waste	means solid waste approved for acceptance under the Licence which has the potential to produce odour emissions that can be detected beyond the premises boundary if left uncovered.
Inert Waste Type 1	Has the same meaning given to that term under the <i>Landfill Waste Classification and Waste Definitions 1996</i> .
Inert Waste Type 2	Has the same meaning given to that term under the <i>Landfill Waste Classification and Waste Definitions 1996</i> .
Landfill Definitions	means the document titled “ <i>Landfill Waste Classification and Waste Definitions 1996</i> ”.
leachate head management level	A leachate level within a cell that: (a) is demonstrative of the engineering and management measures for that cell performing as designed; (b) does not represent an unacceptable risk to the environment and public health; and (c) is set at a level which provides an early warning system for potential engineering or management control failure and to enable appropriate investigation or corrective management measures to be implemented to mitigate potential impacts to the environment and public health.
licence	refers to this document, which evidences the grant of a licence by the CEO under section 57 of the EP Act, subject to the specified

Term	Definition
	conditions contained within.
licence holder	refers to the occupier of the premises, being the person specified on the front of the licence as the person to whom this licence has been granted.
NATA	means the National Association of Testing Authorities, Australia.
NATA accredited	means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis.
premises	refers to the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map, Figure 1 in Schedule 1 to this licence.
prescribed premises	has the same meaning given to that term under the EP Act.
Putrescible waste	Has the same meaning given to that term under the Landfill Waste Classification and Waste Definitions 1996.
Soft waste	Municipal, commercial, industrial and other waste that has a low chance of containing large sharp items that could puncture the landfill liner.
Special Waste Disposal Area	Means the designated disposal areas within an approved landfill cell for the disposal of Special Waste Type 2.
Special Waste Type 2	Has the same meaning given to that term under the Landfill Waste Classification and Waste Definitions 1996.
spot sample	means a discrete sample representative at the time and place at which the sample is taken.
waste	has the same meaning given to that term under the EP Act.

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**END OF CONDITIONS**

# Schedule 1: Maps

## Premises map

The boundary of the prescribed premises is shown in the map below (Figure 1).

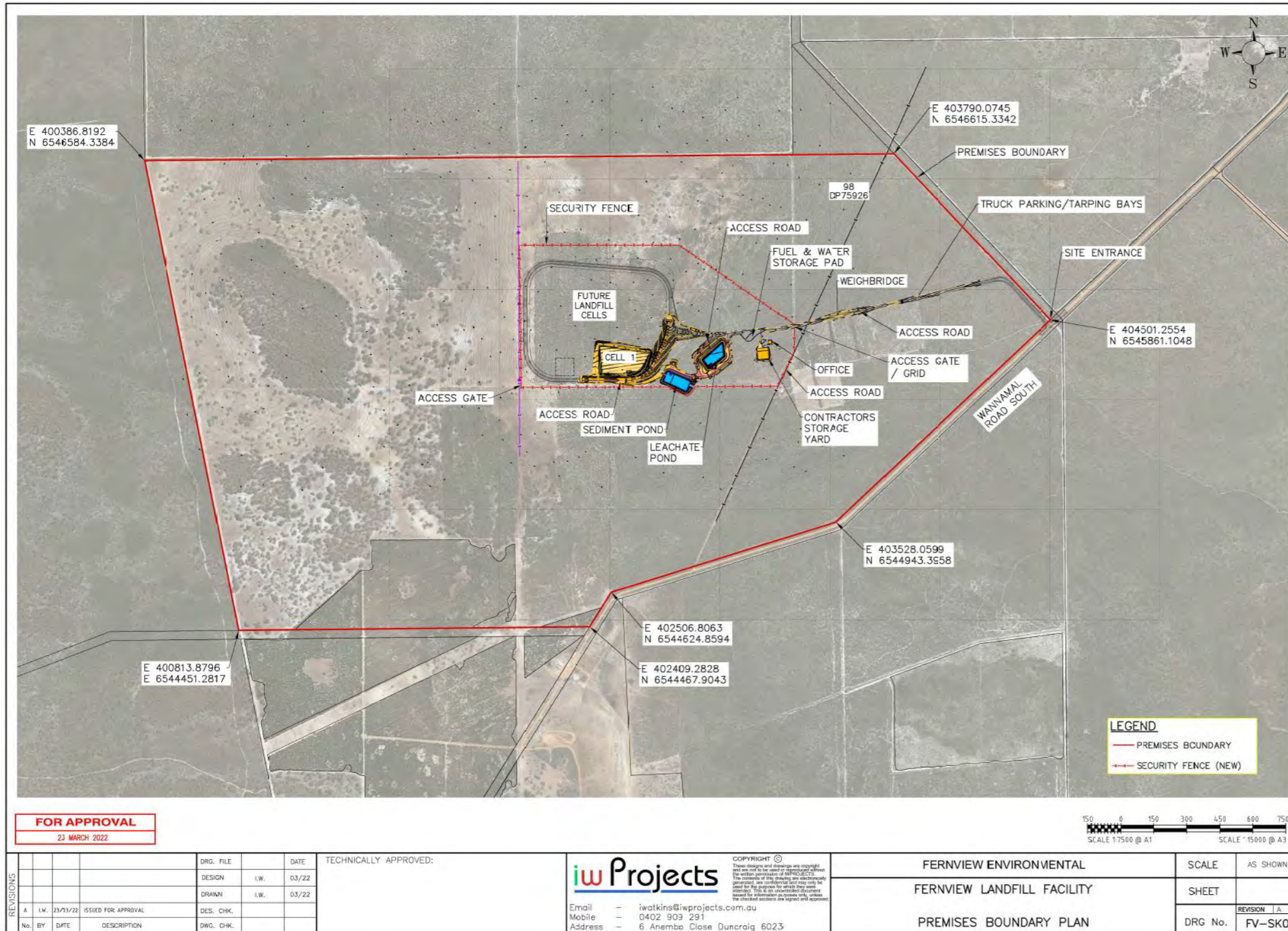


Figure 1: Map of the boundary of the prescribed premises

L9443/2024/1 (19/11/2024)

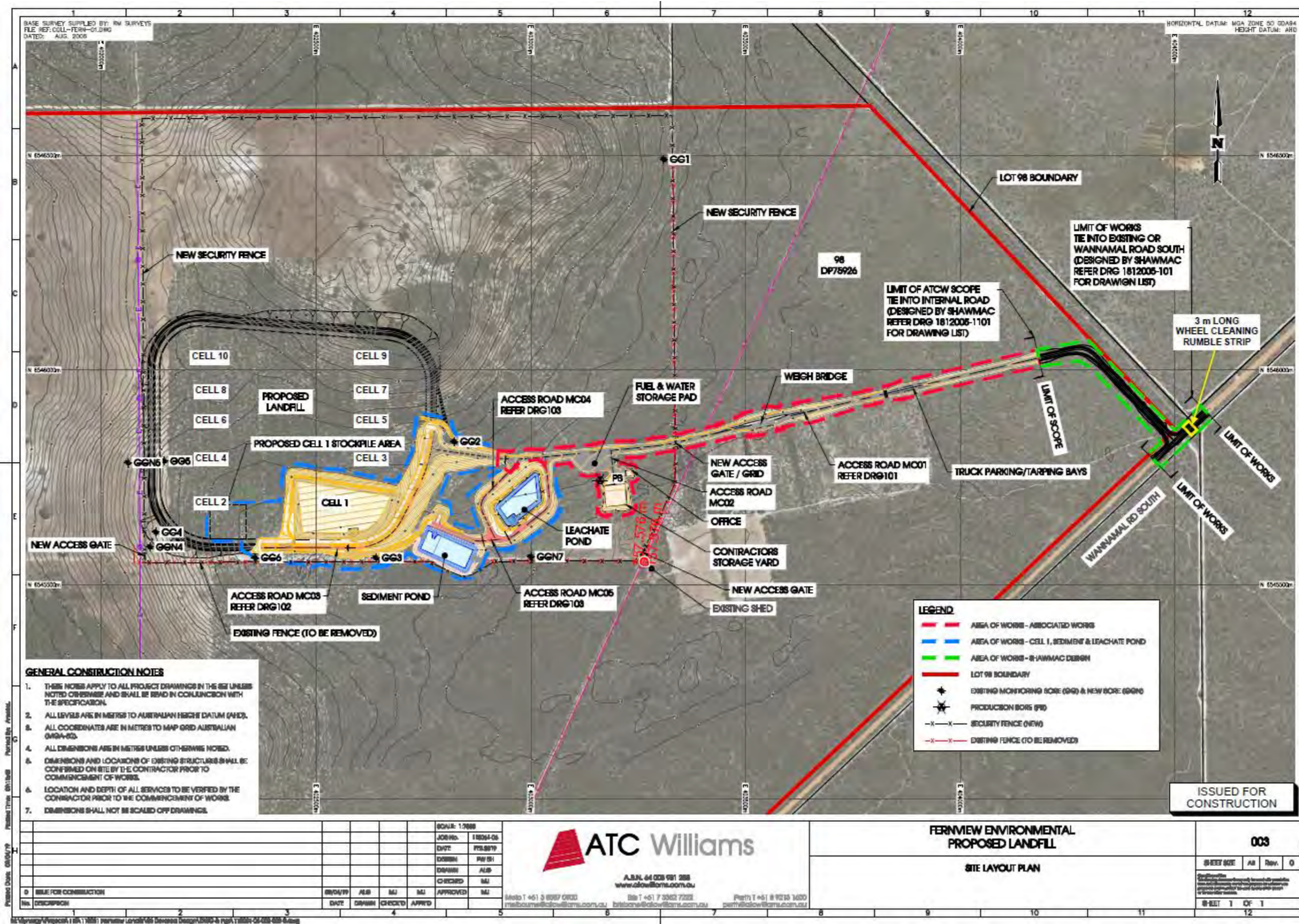


Figure 2: Site layout

L9443/2024/1 (19/11/2024)

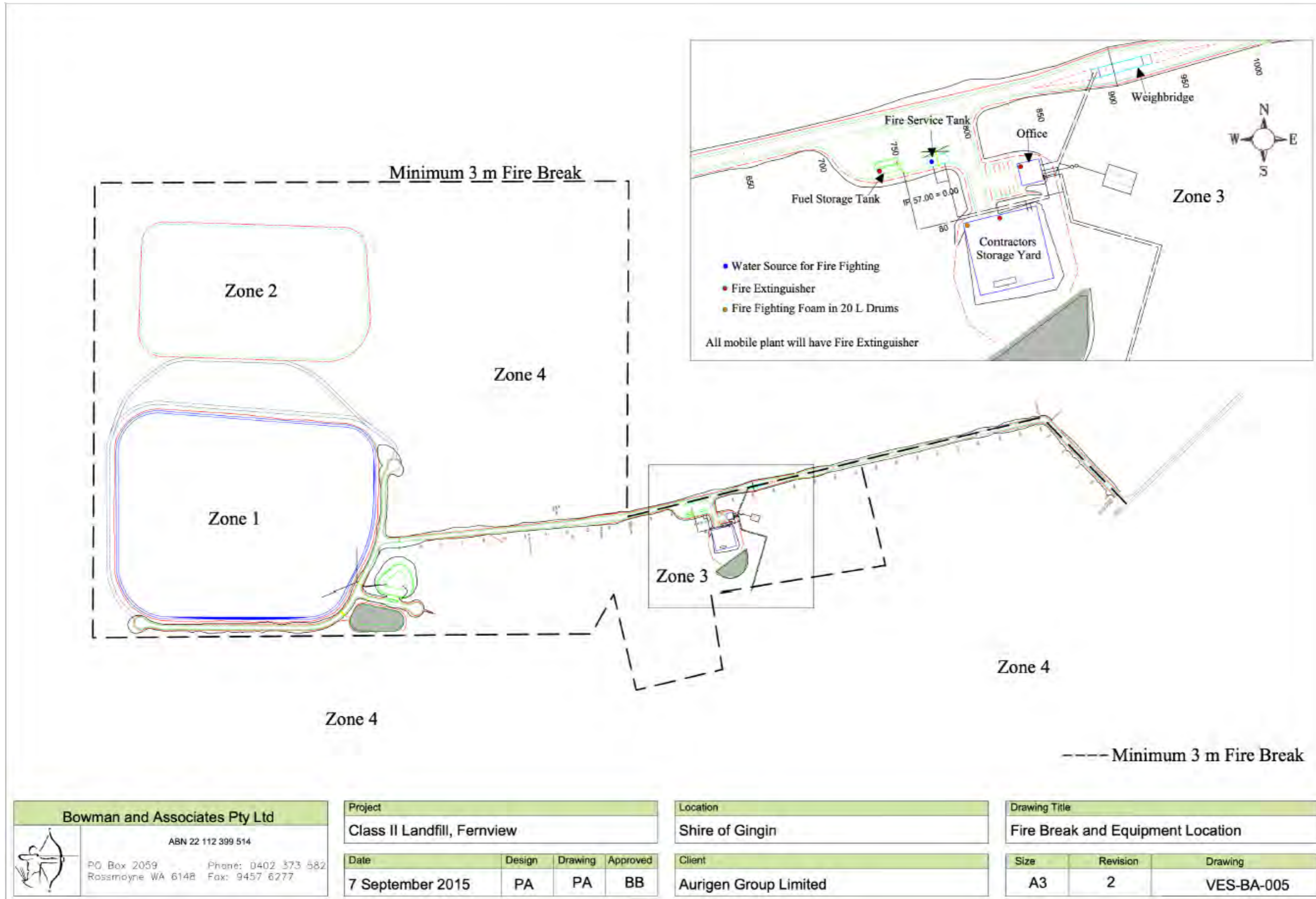


Figure 3: Fire break and equipment location

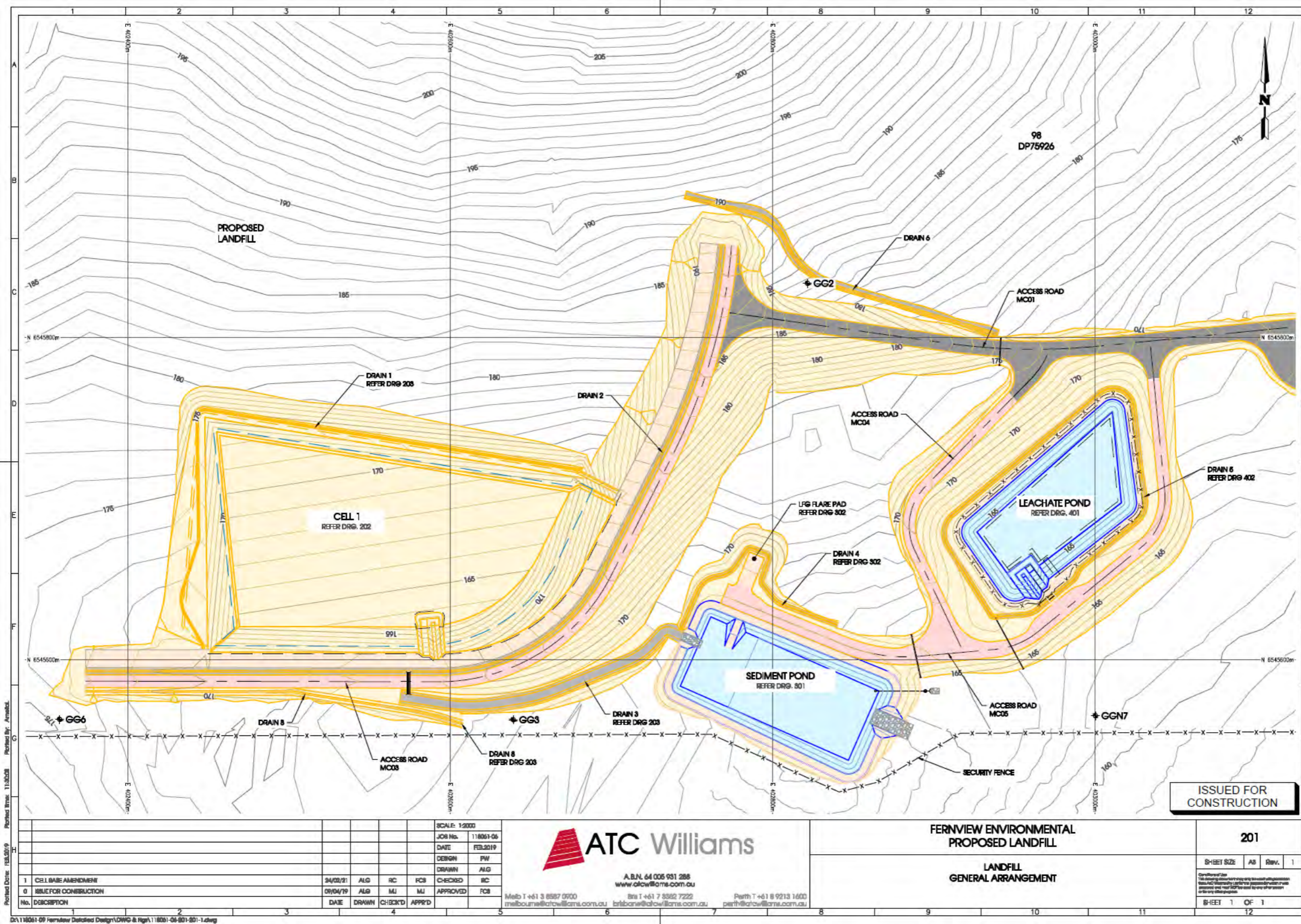


Figure 4: Stormwater management system and leachate management system arrangement

L9443/2024/1 (19/11/2024)

IR-T06 Licence template (v10.0) (May 2024)

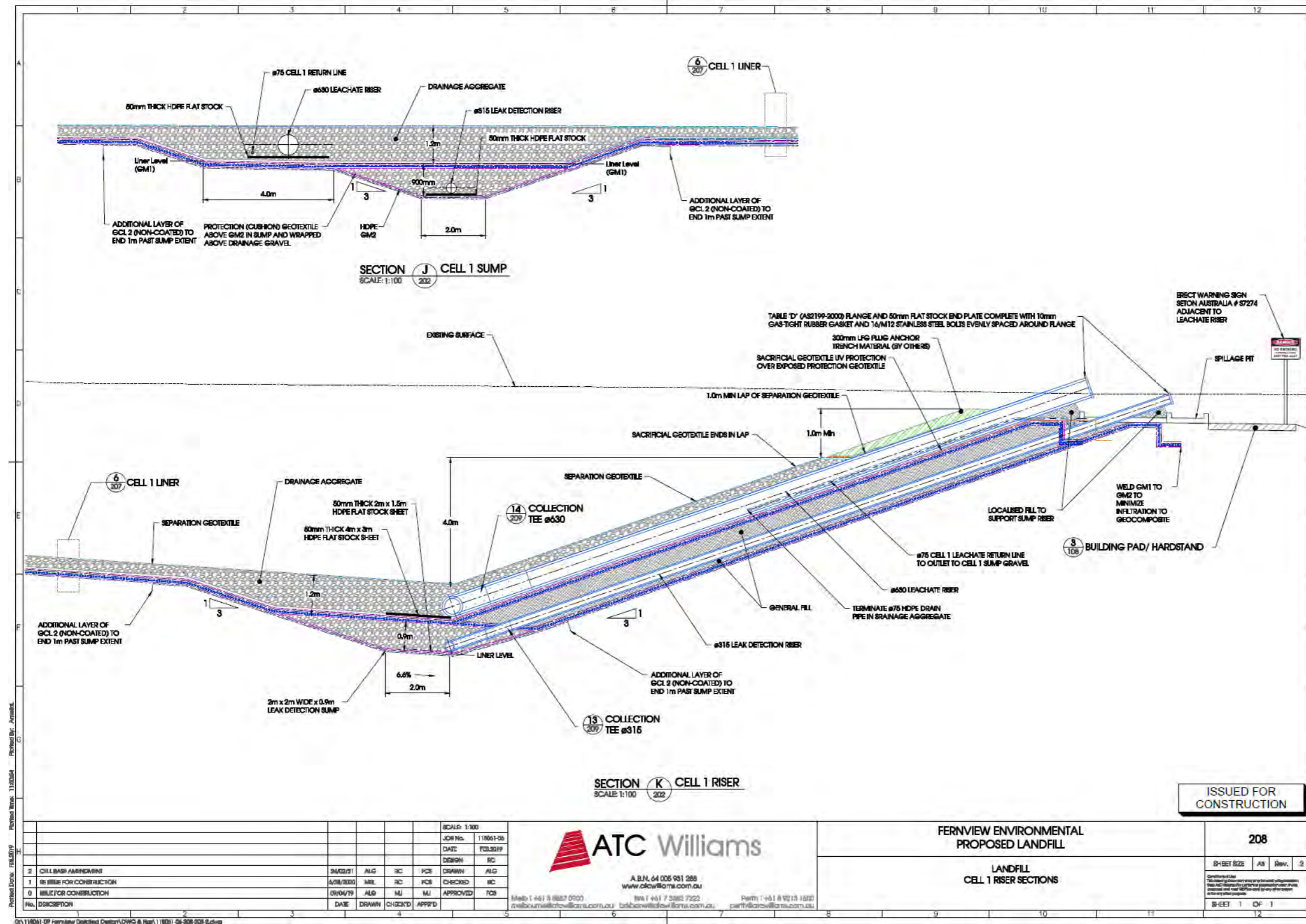


Figure 5: Leachate collection and extraction system in Landfill Cell 1

L9443/2024/1 (19/11/2024)

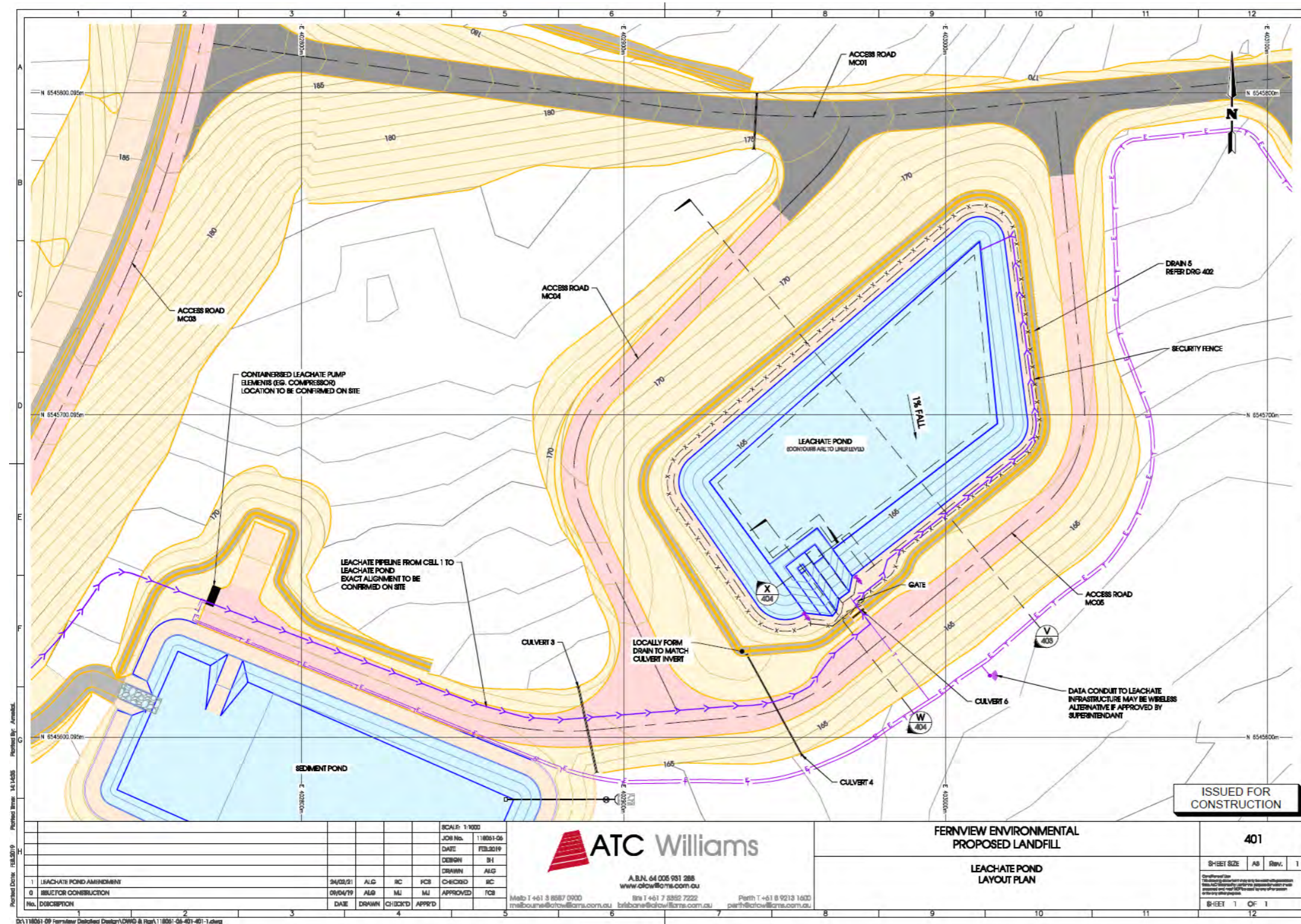


Figure 6: Leachate management system (leachate pipeline from cell 1 to leachate pond)

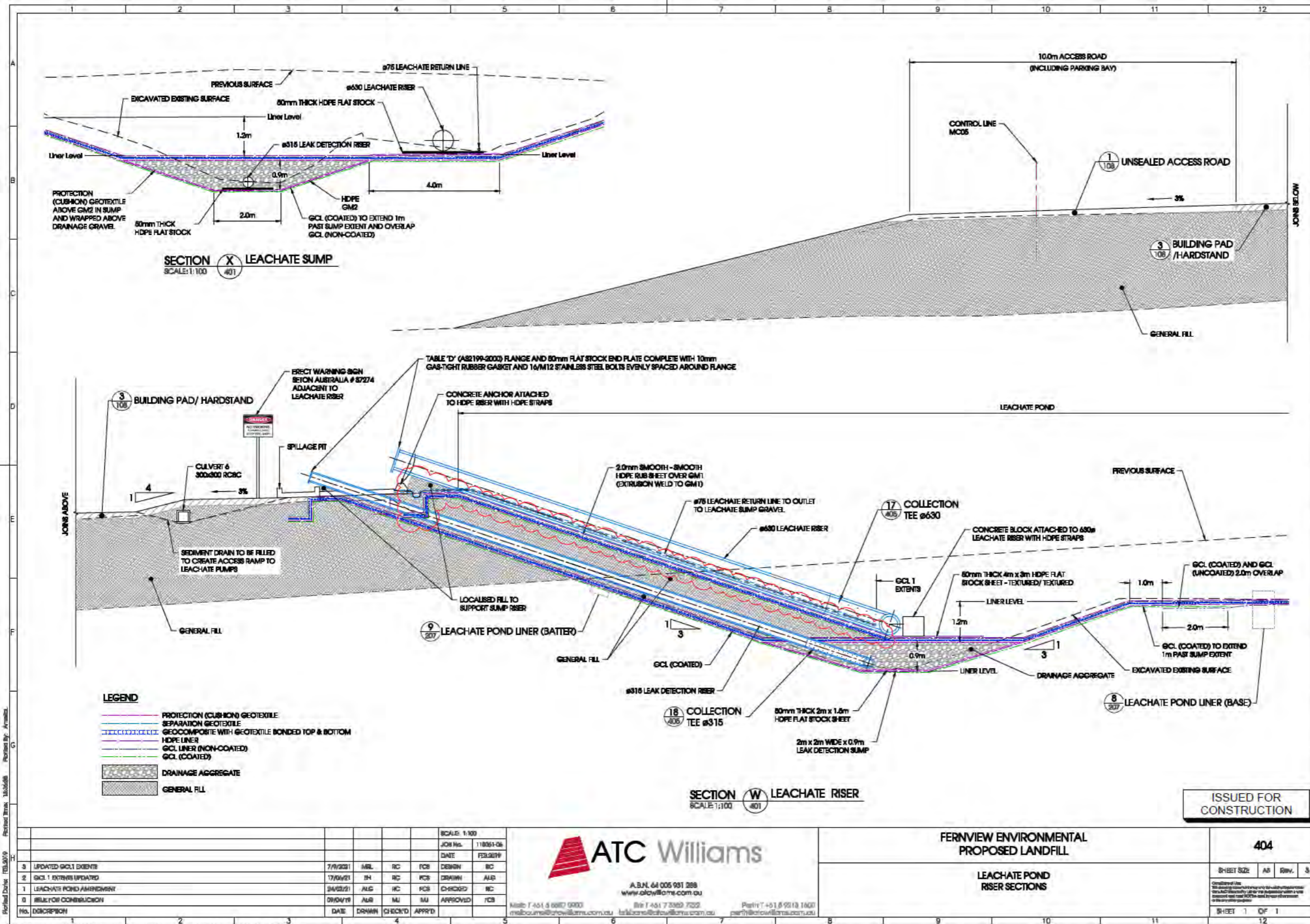


Figure 7: Leachate pond riser sections

L9443/2024/1 (19/11/2024)

IR-T06 Licence template (v10.0) (May 2024)

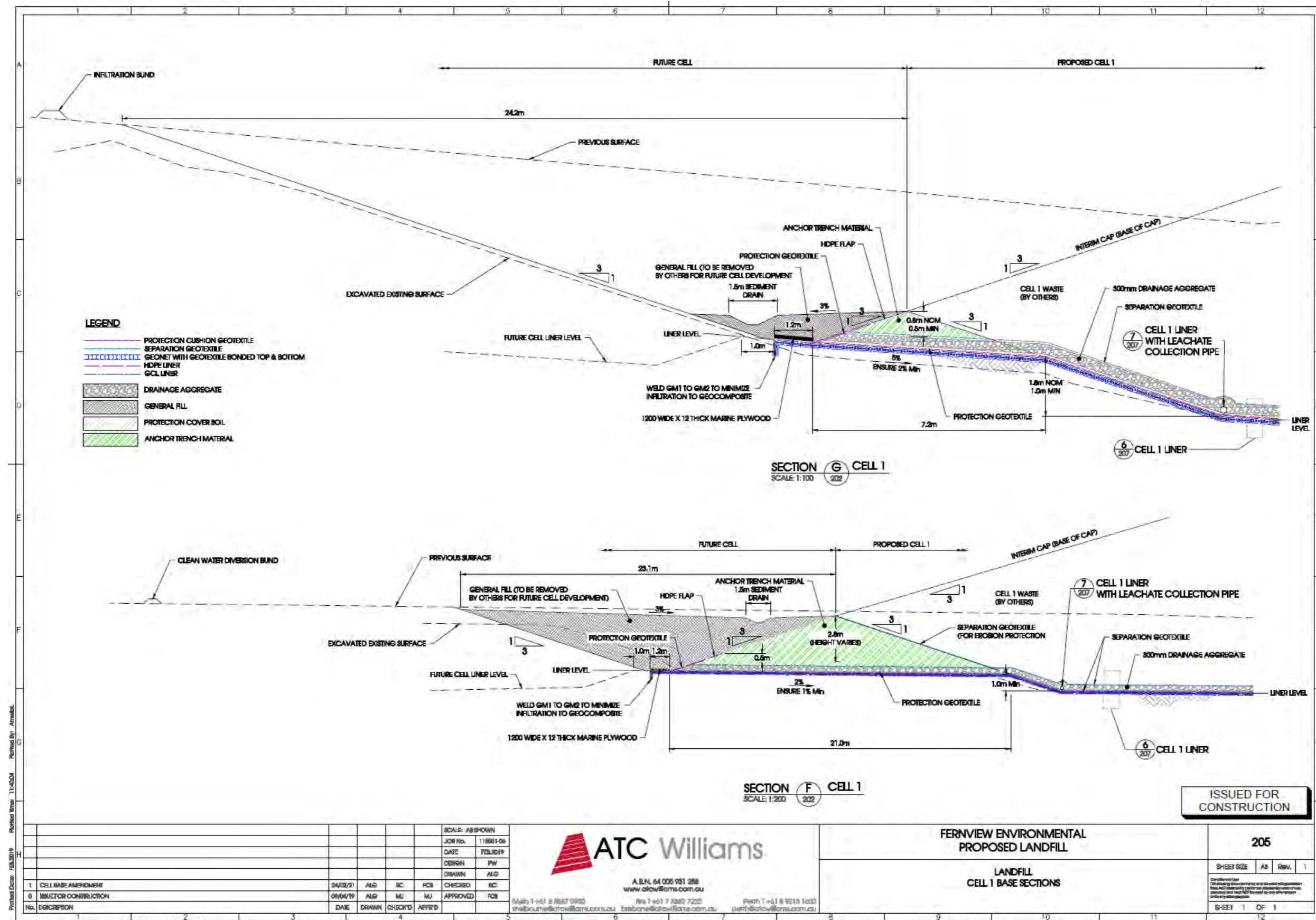


Figure 8: Cell 1 liner details

L9443/2024/1 (19/11/2024)

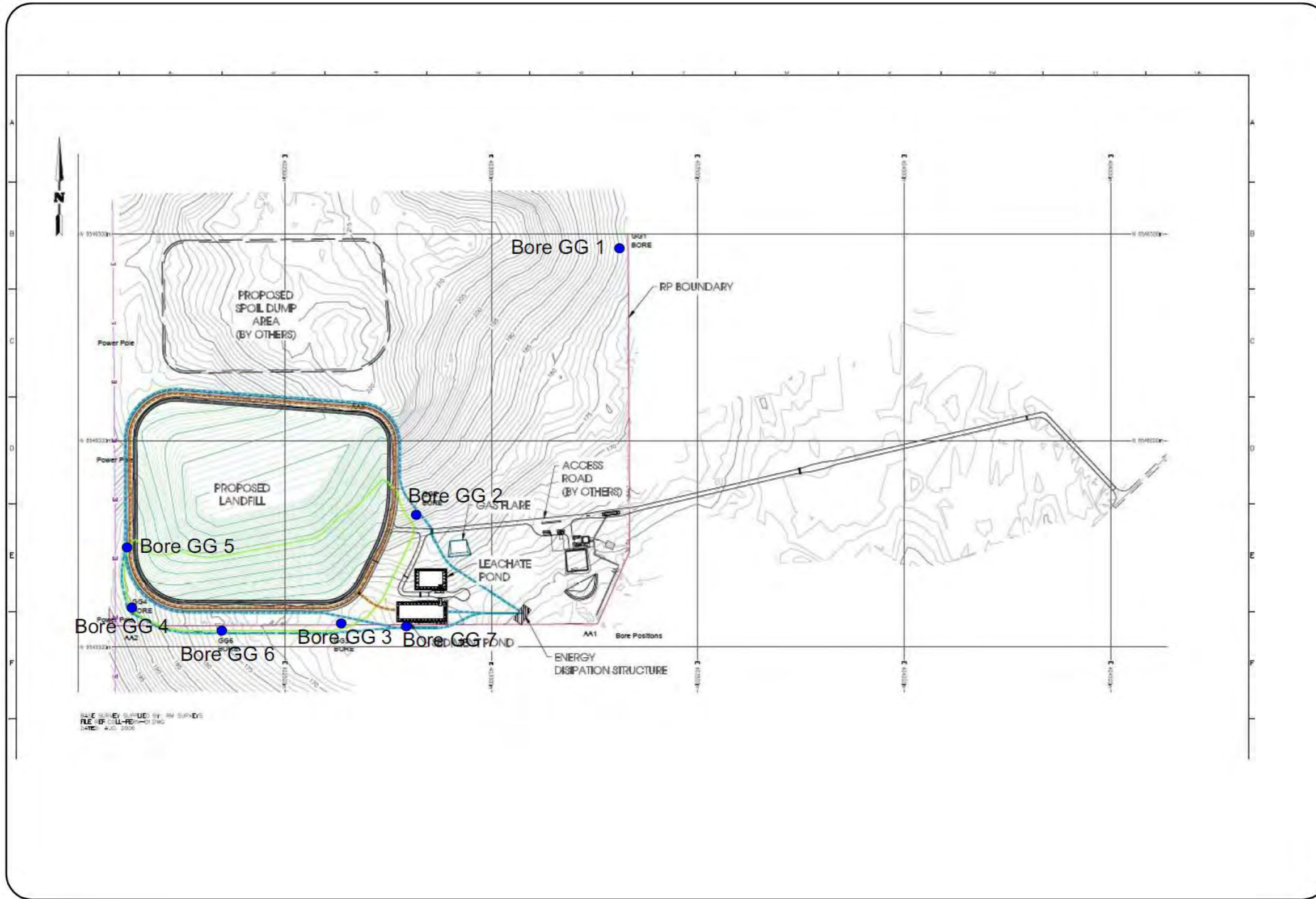


Figure 9: Groundwater monitoring well location

## Appendix B Field Record Forms





# Daily Field Report

Date 28-10-25 Page \_\_\_ of \_\_\_

Project number \_\_\_\_\_ Project manager BH

Project name Fernview compliance monitoring Completed by BC

Arrival time \_\_\_\_\_ Weather Sunny

Depart time \_\_\_\_\_

Subcontractor(s) \_\_\_\_\_

Site address \_\_\_\_\_

Purpose of visit \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Notes Sampled GG1A (duplicate and triplicate taken here)

(include sketch or GG5

attach site GG6

map/plan) \_\_\_\_\_

I ended up getting bogged on site in the late afternoon, which hindered my ability to complete sampling.

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## Groundwater Gauging Data

PROJECT NAME: Cullalla Landfill GME	PROJECT NO: 70121
FIELDWORK DATES: 27/10/2025	SAMPLERS: BC
TYPE OF INVESTIGATION: GME	PROJECT MANAGER: BC

WELL ID	DATE	TIME	DEPTH TO LNAPL (mbtoc)	DEPTH TO WATER (mbtoc)	DEPTH TO DNAPL (mbtoc)	TOTAL DEPTH (mbtoc)	NAPL VISUALLY VERIFIED	COMMENTS
GG01	27/10/2025		-	36.050	-	42.531	N	
GG02	27/10/2025		-	40.823	-	45.061	N	
GG03	27/10/2025		-	25.340	-	45.814	N	
GG04	27/10/2025		-	46.856	-	53.546	N	
GG05	27/10/2025		-	46.120	-	53.974	N	
GG06	27/10/2025		-	29.150	-	53.391	N	
GG07	27/10/2025		-	22.567	-	27.521	N	

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



**Groundwater Sampling Form** — *Could not get car to well trailer needed.*

PROJECT NAME: Fernview Cullalla	PROJECT NO:70121
SAMPLING DATES:	SAMPLERS:BC
TYPE OF INVESTIGATION:	PROJECT MANAGER:BC
WELL ID: GA3	WEATHER:

Casing Diameter (mm): 50mm	Depth to NAPL (mBTOC):
Well Completion: Flush Mount / Monument	Depth to SWL (mBTOC): 25.34
Well Cap Type: Locking Cap / PVC / Other	NAPL Thickness (m):
Well Condition: Good / Compromised	Depth to EoH (mbtoc): >30.00
Calculated Well Volume (L):	Water Column Depth (m):
Sampling Method:	NAPL Visually Verified?
Purge Volume 4 Casings Vol. (L)	
Low Flow Pump Submersion depth (mBTOC)	

TIME	VOLUME PURGED L	DSSOLVED OXYGEN <input type="checkbox"/> % <input checked="" type="checkbox"/> mgL/ppm	TEMP °C	pH pH units	EC _S/cm	ORP mV	Comments Inc SWL for low flow (mBTOC)
12:38		1.33	23.4	6.17	928	-24.4	CGLO
Acceptable Variations*		+/-10%	+/- 0.2 °C	+/-0.05 pH	+/-3%	+/-10mV	Results Acceptable: YES / NO

LOW FLOW: Typical flow rate = 0.2- 0.4 L/min - Max. drawdown = 0.1 m - Well stable when 3 consecutive readings (either 3min apart or 1L apart)

PURGE: Min. sampling volume is 4 casing volumes or dry twice - 1 casing volume (50mm wells) = 2 L/m - 1 casing volume (100mm wells) = 8 L/m

Clarity:		Sheen:	YES / NO
Colour:		Odour:	YES / NO

## Groundwater Sampling Form

PROJECT NAME: Fernview Cullalla	PROJECT NO:70121
SAMPLING DATES:	SAMPLERS:BC
TYPE OF INVESTIGATION:	PROJECT MANAGER:BC
WELL ID: <i>GG7</i>	WEATHER:

Casing Diameter (mm): 50mm	Depth to NAPL (mBTOC):
Well Completion: Flush Mount / <u>Monument</u>	Depth to SWL (mBTOC): <i>22.567</i>
Well Cap Type: Locking Cap / PVC / Other	NAPL Thickness (m): <i>0.70</i>
Well Condition: Good / Compromised	Depth to EoH (mbtoc): <i>28.90</i>
Calculated Well Volume (L):	Water Column Depth (m):
Sampling Method:	NAPL Visually Verified?
Purge Volume: <u>4 Casings Vol. (L)</u>	
Low Flow Pump Submersion depth (mBTOC)	

TIME	VOLUME PURGED L	DSSOLVED OXYGEN <input type="checkbox"/> % <input checked="" type="checkbox"/> mgL/ppm	TEMP °C	pH pH units	EC _S/cm	ORP mV	Comments Inc SWL for low flow (mBTOC)
<i>10.39</i>		<i>4.37</i>	<i>21.8</i>	<i>5.53</i>	<i>540</i>	<i>138.7</i>	<i>light grey brown, low turb odourless</i>
Acceptable Variations*		+/-10%	+/- 0.2 °C	+/-0.05 pH	+/-3%	+/-10mV	Results Acceptable: YES / NO

LOW FLOW: Typical flow rate = 0.2- 0.4 L/min - Max. drawdown = 0.1 m - Well stable when 3 consecutive readings (either 3min apart or 1L apart)

PURGE: Min. sampling volume is 4 casing volumes or dry twice - 1 casing volume (50mm wells) = 2 L/m - 1 casing volume (100mm wells) = 8 L/m

Clarity:		Sheen:	YES / NO
Colour:		Odour:	YES / NO



# Groundwater Sampling Form

PROJECT NAME: Fernview Cullalla	PROJECT NO: 70121
SAMPLING DATES: 28.10.25	SAMPLERS: BC
TYPE OF INVESTIGATION:	PROJECT MANAGER: BC
WELL ID: GGA1A	WEATHER: Fine, Sunny

Casing Diameter (mm): 50mm	Depth to NAPL (mBTC):
Well Completion: Flush Mount / Monument	Depth to SWL (mBTC): 36.05
Well Cap Type: Locking Cap / PVC / Other	NAPL Thickness (m):
Well Condition: Good / Compromised	Depth to EoH (mbtoc): 42.07
Calculated Well Volume (L):	Water Column Depth (m):
Sampling Method:	NAPL Visually Verified?
Purge Volume 4 Casings Vol. (L)	
Low Flow Pump Submersion depth (mBTC)	

TIME	VOLUME PURGED L	DSSOLVED OXYGEN <input type="checkbox"/> % <input checked="" type="checkbox"/> mgL/ppm	TEMP °C	pH pH units	EC _S/cm	ORP mV	Comments
9:55	0.0	2.64	23.2	5.58	3356	42.1	Inc SWL for low flow (mBTC)
10:00	1.0	0.75	21.9	5.59	3333	42.9	
10:05	2.0	0.80	21.9	5.59	3340	42.9	
10:10	3.0	0.78	21.7	5.59	3333	43.1	
Acceptable Variations*		+/-10%	+/- 0.2 °C	+/-0.05 pH	+/-3%	+/-10mV	Results Acceptable: YES / NO

LOW FLOW: Typical flow rate = 0.2- 0.4 L/min - Max. drawdown = 0.1 m - Well stable when 3 consecutive readings (either 3min apart or 1L apart)

PURGE: Min. sampling volume is 4 casing volumes or dry twice - 1 casing volume (50mm wells) = 2 L/m - 1 casing volume (100mm wells) = 8 L/m

Clarity:		Sheen:	YES / NO
Colour:		Odour:	YES / NO

### Groundwater Sampling Form

PROJECT NAME: Fernview Cullalla	PROJECT NO:70121
SAMPLING DATES:	SAMPLERS:BC
TYPE OF INVESTIGATION:	PROJECT MANAGER:BC
WELL ID: <u>995</u>	WEATHER:

Casing Diameter (mm): 50mm	Depth to NAPL (mBTOC):
Well Completion: Flush Mount / Monument	Depth to SWL (mBTOC): <u>46.12</u>
Well Cap Type: Locking Cap / PVC / Other	NAPL Thickness (m):
Well Condition: Good / Compromised	Depth to EoH (mbtoc): <u>53.89</u>
Calculated Well Volume (L):	Water Column Depth (m):
Sampling Method:	NAPL Visually Verified?
Purge Volume 4 Casings Vol. (L)	
Low Flow Pump Submersion depth (mBTOC)	

TIME	VOLUME PURGED L	DSSOLVED OXYGEN <input type="checkbox"/> % <input type="checkbox"/> mgL/ppm	TEMP °C	pH pH units	EC _S/cm	ORP mV	Comments Inc SWL for low flow (mBTOC)
<u>2:25</u>	<u>1.0</u>	<u>8.44</u>	<u>30.4</u>	<u>5.93</u>	<u>345.4</u>	<u>48.3</u>	
<u>2:30</u>	<u>2.0</u>	<u>4.56</u>	<u>27.9</u>	<u>5.56</u>	<u>343.6</u>	<u>79.2</u>	
<u>2:35</u>	<u>3.0</u>	<u>2.31</u>	<u>27.8</u>	<u>5.51</u>	<u>345.0</u>	<u>73.4</u>	
<u>2:38</u>	<u>4.0</u>	<u>2.28</u>	<u>27.8</u>	<u>5.51</u>	<u>343.1</u>	<u>71.2</u>	
<u>2:41</u>	<u>5.0</u>	<u>2.34</u>	<u>27.6</u>	<u>5.50</u>	<u>344.9</u>	<u>65.6</u>	<u>SGO</u>
Acceptable Variations*		+/-10%	+/- 0.2 °C	+/-0.05 pH	+/-3%	+/-10mV	Results Acceptable: YES / NO

LOW FLOW: Typical flow rate = 0.2- 0.4 L/min - Max. drawdown = 0.1 m - Well stable when 3 consecutive readings (either 3min apart or 1L apart)

PURGE: Min. sampling volume is 4 casing volumes or dry twice - 1 casing volume (50mm wells) = 2 L/m - 1 casing volume (100mm wells) = 8 L/m

Clarity:		Sheen:	YES / NO
Colour:		Odour:	YES / NO

## Groundwater Sampling Form

PROJECT NAME: Fernview Cullalla	PROJECT NO:70121
SAMPLING DATES:	SAMPLERS:BC
TYPE OF INVESTIGATION:	PROJECT MANAGER:BC
WELL ID: <u>6406</u>	WEATHER: <u>Fin, sunny</u>

Casing Diameter (mm): <u>50mm 100</u>	Depth to NAPL (mBTOC):
Well Completion: Flush Mount <input checked="" type="checkbox"/> Monument	Depth to SWL (mBTOC): <u>29.15</u>
Well Cap Type: Locking Cap <input checked="" type="checkbox"/> PVC <input checked="" type="checkbox"/> Other	NAPL Thickness (m):
Well Condition: <input checked="" type="checkbox"/> Good <input type="checkbox"/> Compromised	Depth to EoH (mbtoc): <u>52.08</u>
Calculated Well Volume (L):	Water Column Depth (m):
Sampling Method:	NAPL Visually Verified?
Purge Volume 4 Casings Vol. (L)	
Low Flow Pump Submersion depth (mBTOC)	

TIME	VOLUME PURGED L	DSSOLVED OXYGEN <input type="checkbox"/> % <input checked="" type="checkbox"/> mgL/ppm	TEMP °C	pH pH units	EC _S/cm	ORP mV	Comments Inc SWL for low flow (mBTOC)
12:15	0.0	—					
12:20	1.0	—					
12:25	2.0	1.26	23.5	6.02	1478	-87.9	C, C, O
12:30	3.0	0.47	22.9	6.08	1435	-97.5	
12:35	4.0	0.27	22.4	6.07	1431	-107.4	
12:40	5.0	0.25	22.6	6.06	1433	-110.3	
12:45	6.0	0.27	22.6	6.05	1435	-115.9	
Acceptable Variations*		+/-10%	+/- 0.2 °C	+/-0.05 pH	+/-3%	+/-10mV	Results Acceptable: YES / NO

LOW FLOW: Typical flow rate = 0.2- 0.4 L/min - Max. drawdown = 0.1 m - Well stable when 3 consecutive readings (either 3min apart or 1L apart)

PURGE: Min. sampling volume is 4 casing volumes or dry twice - 1 casing volume (50mm wells) = 2 L/m - 1 casing volume (100mm wells) = 8 L/m

Clarity:		Sheen:	YES / NO
Colour:		Odour:	YES / NO

# Groundwater Sampling Form

PROJECT NAME:	PROJECT NO: 70121
SAMPLING DATES: 31-10-25	SAMPLERS: DF
TYPE OF INVESTIGATION: GME	PROJECT MANAGER: BC
WELL ID: GG2	WEATHER: Fine

Casing Diameter (mm): 50mm	Depth to NAPL (mBTOC):
Well Completion: Flush Mount / Monument	Depth to SWL (mBTOC): 40.823
Well Cap Type: Locking Cap / PVC / Other	NAPL Thickness (m):
Well Condition: Good / Compromised	Depth to EoH (mbtoc): 44.168
Calculated Well Volume (L):	Water Column Depth (m):
Sampling Method:	NAPL Visually Verified?
Purge Volume 4 Casings Vol. (L)	
Low Flow Pump Submersion depth (mBTOC)	

TIME	VOLUME PURGED L	DSSOLVED OXYGEN <input type="checkbox"/> % <input checked="" type="checkbox"/> mgL/ppm	TEMP °C	pH pH units	EC _S/cm	ORP mV	Comments Inc SWL for low flow (mBTOC)
1	9.98	9.98	21.8	7.23	109.6	68.5	No draw down
2	10.18	10.18	21.7	7.20	108.9	61.7	
3	9.97	9.97	21.7	7.20	107.5	62.8	
Acceptable Variations*		+/-10%	+/- 0.2 °C	+/-0.05 pH	+/-3%	+/-10mV	Results Acceptable: YES / NO

LOW FLOW: Typical flow rate = 0.2- 0.4 L/min - Max. drawdown = 0.1 m - Well stable when 3 consecutive readings (either 3min apart or 1L apart)

PURGE: Min. sampling volume is 4 casing volumes or dry twice - 1 casing volume (50mm wells) = 2 L/m - 1 casing volume (100mm wells) = 8 L/m

Clarity:	Turbid	Sheen:	YES / NO
Colour:	Brown	Odour:	YES / NO

## Groundwater Sampling Form

PROJECT NAME:	PROJECT NO: 70121
SAMPLING DATES:	SAMPLERS:
TYPE OF INVESTIGATION:	PROJECT MANAGER:
WELL ID: GG4A	WEATHER:

Casing Diameter (mm): 50	Depth to NAPL (mBTOC):
Well Completion: Flush Mount / Monument	Depth to SWL (mBTOC):
Well Cap Type: Locking Cap / PVC / Other	NAPL Thickness (m):
Well Condition: Good / Compromised	Depth to EoH (mbtoc):
Calculated Well Volume (L):	Water Column Depth (m):
Sampling Method:	NAPL Visually Verified?
Purge Volume 4 Casings Vol. (L)	
Low Flow Pump Submersion depth (mBTOC)	

TIME	VOLUME PURGED L	DSSOLVED OXYGEN <input type="checkbox"/> % <input checked="" type="checkbox"/> mgL/ppm	TEMP °C	pH pH units	EC _S/cm	ORP mV	Comments Inc SWL for low flow (mBTOC)
	1	7.89	24.2	5.53	299.5	97.6	No draw down
	2	7.80	24.2	5.53	280.6	99.8	
	3	7.72	24.1	5.52	273.5	101.9	
Acceptable Variations*		+/-10%	+/- 0.2 °C	+/-0.05 pH	+/-3%	+/-10mV	Results Acceptable: YES / NO

LOW FLOW: Typical flow rate = 0.2- 0.4 L/min - Max. drawdown = 0.1 m - Well stable when 3 consecutive readings (either 3min apart or 1L apart)

PURGE: Min. sampling volume is 4 casing volumes or dry twice - 1 casing volume (50mm wells) = 2 L/m - 1 casing volume (100mm wells) = 8 L/m

Clarity:	Turbid	Sheen:	YES / <del>NO</del>
Colour:	Slight Green	Odour:	YES / <del>NO</del>

## Appendix C Analytical Results Tables



	Metals & Metalloids												C6-C9 Fraction	C10-C14 Fraction
	Aluminium (filtered)	Arsenic (filtered)	Cadmium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)	Iron	Lead (filtered)	Manganese (filtered)	Mercury (filtered)	Nickel (filtered)	Selenium (filtered)	Zinc (filtered)		
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.05	0.001	0.0001	0.001	0.001	0.01	0.001	0.005	0.0001	0.001	0.001	0.005	0.02	0.02
DoH 2014 - Non-Potable Groundwater Use (NPUG)	0.2	0.1	0.02	0.5	20	0.3	0.1	5	0.01	0.2	0.1	3		
zz ANZG (2018) Freshwater 99% toxicant DGVs	0.027	0.0008	0.00006	0.00001	0.001		0.001	1.2	0.00006	0.008	0.005	0.0024		

Field ID	Date	Aluminium (filtered)	Arsenic (filtered)	Cadmium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)	Iron	Lead (filtered)	Manganese (filtered)	Mercury (filtered)	Nickel (filtered)	Selenium (filtered)	Zinc (filtered)	C6-C9 Fraction	C10-C14 Fraction
GG01	28 Oct 2025	<0.05	0.008	<0.0001	0.002	<0.001	46	<0.001	0.041	<0.0001	0.002	<0.001	0.008	<0.02	<0.02
GG2	31 Oct 2025	<0.05	<0.001	<0.0001	<0.001	0.021	4.1	0.016	<0.005	<0.0001	0.004	<0.001	0.054	<0.02	<0.02
GG03	27 Oct 2025	0.05	0.008	<0.0001	0.010	<0.001	4.4	<0.001	0.028	<0.0001	<0.001	<0.001	<0.005	<0.02	<0.02
GG4A	31 Oct 2025	<0.05	<0.001	<0.0001	<0.001	0.003	1.8	<0.001	0.009	<0.0001	0.004	<0.001	0.068	<0.02	<0.02
GG05	28 Oct 2025	<0.05	<0.001	<0.0001	<0.001	<0.001	1.2	<0.001	<0.005	<0.0001	0.002	<0.001	<0.005	<0.02	<0.02
GG06	28 Oct 2025	<0.05	0.008	<0.0001	0.007	<0.001	5.5	<0.001	0.017	<0.0001	<0.001	<0.001	0.008	<0.02	<0.02
GG07	27 Oct 2025	<0.05	<0.001	<0.0001	<0.001	<0.001	5.9	<0.001	0.010	<0.0001	<0.001	<0.001	<0.005	<0.02	<0.02



TPHs (NEPC 1999)			TRHs (NEPC 2013)								BTEXN				
C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum of Total)	C6-C10	C10-C16	C16-C34	C34-C40	C10-C40 (Sum of total)	F1 (C6-C10 minus BTEX)	F2 (C10-C16 less Naphthalene)	Benzene	Toluene	Ethylbenzene	Xylene (o)		
mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		
EQL	0.04	0.04	0.02	0.02	0.05	0.05	0.05	0.02	0.02	0.001	0.001	0.001	0.001		
DoH 2014 - Non-Potable Groundwater Use (NPUG)					0.9	0.9			1	0.01	0.025	0.003			
zz ANZG (2018) Freshwater 99% toxicant DGVs										0.6	0.11	0.05	0.2		
Field ID	Date	<0.04	<0.04	<0.04	<0.02	<0.02	<0.05	<0.05	<0.05	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001
GG01	28 Oct 2025	<0.04	<0.04	<0.04	<0.02	<0.02	<0.05	<0.05	<0.05	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001
GG2	31 Oct 2025	<0.04	<0.04	<0.04	<0.02	<0.02	<0.05	<0.05	<0.05	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001
GG03	27 Oct 2025	<0.04	<0.04	<0.04	<0.02	<0.02	<0.05	<0.05	<0.05	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001
GG4A	31 Oct 2025	<0.04	<0.04	<0.04	<0.02	<0.02	<0.05	<0.05	<0.05	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001
GG05	28 Oct 2025	<0.04	<0.04	<0.04	<0.02	<0.02	<0.05	<0.05	<0.05	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001
GG06	28 Oct 2025	<0.04	<0.04	<0.04	<0.02	<0.02	<0.05	<0.05	<0.05	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001
GG07	27 Oct 2025	<0.04	<0.04	<0.04	<0.02	<0.02	<0.05	<0.05	<0.05	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001



	PAH													
	Xylene (m & p)	Xylene Total	Naphthalene_VOC	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.002	0.003	0.001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002
DoH 2014 - Non-Potable Groundwater Use (NPUG)		0.02							0.0001					
zz ANZG (2018) Freshwater 99% toxicant DGVs	0.05		0.0025				0.00001		0.0001					

Field ID	Date	Xylene (m & p)	Xylene Total	Naphthalene_VOC	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene
GG01	28 Oct 2025	<0.002	<0.003	<0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00002
GG2	31 Oct 2025	<0.002	<0.003	<0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00002
GG03	27 Oct 2025	<0.002	<0.003	<0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00002
GG4A	31 Oct 2025	<0.002	<0.003	<0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00002
GG05	28 Oct 2025	<0.002	<0.003	<0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00002
GG06	28 Oct 2025	<0.002	<0.003	<0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00002
GG07	27 Oct 2025	<0.002	<0.003	<0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00002



	Fluoranthene	Fluorene	Indeno(1,2,3-c-d)pyrene	Naphthalene - PAH	Phenanthrene	Pyrene	Pentachlorophenol	2,4-DDT	4,4-DDE	p-BHC	is-BHC	d-BHC	g-BHC (Lindane)	Aldrin
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.00001	0.00001	0.00002	0.00001	0.00001	0.00001	0.001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
DoH 2014 - Non-Potable Groundwater Use (NPUG)							0.1						0.1	
zz ANZG (2018) Freshwater 99% toxicant DGVs	0.001			0.0025	0.0006		0.0036						0.00007	

Field ID	Date	Fluoranthene	Fluorene	Indeno(1,2,3-c-d)pyrene	Naphthalene - PAH	Phenanthrene	Pyrene	Pentachlorophenol	2,4-DDT	4,4-DDE	p-BHC	is-BHC	d-BHC	g-BHC (Lindane)	Aldrin
GG01	28 Oct 2025	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001
GG2	31 Oct 2025	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001
GG03	27 Oct 2025	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001
GG4A	31 Oct 2025	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001
GG05	28 Oct 2025	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001
GG06	28 Oct 2025	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001
GG07	27 Oct 2025	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001



Organochlorine Pesticides														
	Dieldrin	Chlordane	DDT	DDD	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Methoxychlor	Dychlorane	Azinphos methyl
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.000001	0.000002	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000002	0.000001	0.001
DoH 2014 - Non-Potable Groundwater Use (NPUG)		0.02	0.09						0.003	0.003				0.3
zz ANZG (2018) Freshwater 99% toxicant DGVs		0.00003	0.000006					0.00001	0.00001		0.00005			0.00001

Field ID	Date	Dieldrin	Chlordane	DDT	DDD	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Methoxychlor	Dychlorane	Azinphos methyl
GG01	28 Oct 2025	<0.000001	<0.000002	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000002	<0.000001	<0.001
GG2	31 Oct 2025	<0.000001	<0.000002	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000002	<0.000001	<0.001
GG03	27 Oct 2025	<0.000001	<0.000002	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000002	<0.000001	<0.001
GG4A	31 Oct 2025	<0.000001	<0.000002	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000002	<0.000001	<0.001
GG05	28 Oct 2025	<0.000001	<0.000002	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000002	<0.000001	<0.001
GG06	28 Oct 2025	<0.000001	<0.000002	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000002	<0.000001	<0.001
GG07	27 Oct 2025	<0.000001	<0.000002	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000002	<0.000001	<0.001



	Organophosphorus Pesticides									1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	
	Chlorpyrifos	Diazinon	Dimethoate	Ethion	Fenitrothion	Malathion	Methyl parathion	Fenamiphos	Parathion						
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
EQL	0.000005	0.00001	0.0001	0.00001	0.00001	0.00001	0.00002	0.001	0.00002	0.001	0.001	0.001	0.001	0.001	
DoH 2014 - Non-Potable Groundwater Use (NPUG)	0.1	0.04	0.07	0.04	0.07	0.7	0.007	0.005	0.2						
zz ANZG (2018) Freshwater 99% toxicant DGVs	0.00000004	0.00000003	0.0001		0.0001	0.000002			0.0000007		0.13	0.2	5.4		
Field ID	Date														
GG01	28 Oct 2025	<0.000005	<0.00001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.001	<0.00002	<0.001	<0.001	<0.001	<0.001
GG2	31 Oct 2025	<0.000005	<0.00001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.001	<0.00002	<0.001	<0.001	<0.001	<0.001
GG03	27 Oct 2025	<0.000005	<0.00001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.001	<0.00002	<0.001	<0.001	<0.001	<0.001
GG4A	31 Oct 2025	<0.000005	<0.00001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.001	<0.00002	<0.001	<0.001	<0.001	<0.001
GG05	28 Oct 2025	<0.000005	<0.00001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.001	<0.00002	<0.001	<0.001	<0.001	<0.001
GG06	28 Oct 2025	<0.000005	<0.00001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.001	<0.00002	<0.001	<0.001	<0.001	<0.001
GG07	27 Oct 2025	<0.000005	<0.00001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.001	<0.00002	<0.001	<0.001	<0.001	<0.001



		Chlorinated Alkanes													
		1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	Dichlorodifluoromethane	Dichloromethane	Trichlorofluoromethane	1,1-dichloroethene	3-chloropropene	4-chlorotoluene
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL		0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.005	0.005	0.005	0.005	0.001	0.001	0.001
DoH 2014 - Non-Potable Groundwater Use (NPUG)			0.03				0.03				0.04		0.3		
zz ANZG (2018) Freshwater 99% toxicant DGVs			1	0.6	0.7		0.15				3		0.5		
Field ID	Date														
GG01	28 Oct 2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
GG2	31 Oct 2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
GG03	27 Oct 2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
GG4A	31 Oct 2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
GG05	28 Oct 2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
GG06	28 Oct 2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
GG07	27 Oct 2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001



	Chlorinated Alkenes							Solvents		Polychlorinated Biphenyls					
	dis-1,2-dichloroethene	dis-1,3-dichloropropene	tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl Chloride	Acetone	PCBs (Sum of total)	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,4-dimethylphenol	2,4-dinitrophenol	
EQL	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.005	0.00002	0.001	0.001	0.001	0.001	0.001	
DoH 2014 - Non-Potable Groundwater Use (NPUG)			0.5				0.003				0.2	2			
zz ANZG (2018) Freshwater 99% toxicant DGVs			0.04			0.22	0.07				0.003	0.12		0.013	
Field ID	Date														
GG01	28 Oct 2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.00002	<0.001	<0.001	<0.001	<0.001	
GG2	31 Oct 2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.00002	<0.001	<0.001	<0.001	<0.001	
GG03	27 Oct 2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.00002	<0.001	<0.001	<0.001	<0.001	
GG4A	31 Oct 2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.00002	<0.001	<0.001	<0.001	<0.001	
GG05	28 Oct 2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.00002	<0.001	<0.001	<0.001	<0.001	
GG06	28 Oct 2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.00002	<0.001	<0.001	<0.001	<0.001	
GG07	27 Oct 2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.00002	<0.001	<0.001	<0.001	<0.001	



Phenols														
	2,6-dichlorophenol	2-chlorophenol	2-Methylphenol	2-nitrophenol	3&4-Methylphenol (m&sp-cresol)	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl Phenol	4-Chloro-3-Methylphenol	4-nitrophenol	Cresol Total	Phenol	Tetrachlorophenols	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.001	0.001	0.001	0.001	0.001	0.001	0.003	0.001	0.001	0.01	0.001	0.001	0.01	0.1
DoH 2014 - Non-Potable Groundwater Use (NPUG)		3												
zz ANZG (2018) Freshwater 99% toxicant DGVs		0.34									0.085			
Field ID	Date													
GG01	28 Oct 2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.1
GG2	31 Oct 2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.1
GG03	27 Oct 2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.1
GG4A	31 Oct 2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.1
GG05	28 Oct 2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.1
GG06	28 Oct 2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.1
GG07	27 Oct 2025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.1



	MAH						Miscellaneous Hydrocarbons						Chlorinated	
	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Styrene	Total MAH	Bromobenzene	Isopropylbenzene	1,2-dibromoethane	Bromomethane	Dibromomethane	Iodomethane	4-Methyl-2-pentanone	Methyl Ethyl Ketone	1,2-Dichlorobenzene	1,3-dichlorobenzene
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.001	0.001	0.001	0.003	0.001	0.001	0.001	0.005	0.001	0.001	0.005	0.005	0.001	0.001
DoH 2014 - Non-Potable Groundwater Use (NPUG)			0.004					0.01					0.001	0.02
zz ANZG (2018) Freshwater 99% toxicant DGVs						0.02							0.12	0.16
Field ID	Date													
GG01	28 Oct 2025		<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.005	<0.001
GG2	31 Oct 2025		<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.005	<0.001
GG03	27 Oct 2025		<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.005	<0.001
GG4A	31 Oct 2025		<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.005	<0.001
GG05	28 Oct 2025		<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.005	<0.001
GG06	28 Oct 2025		<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.005	<0.001
GG07	27 Oct 2025		<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.005	<0.001



	Benzenes		Trihalomethanes				Carbarmate & Other Pesticides								
	1,4-dichlorobenzene	Chlorobenzene	Dibromochloromethane	Chloroform	Tribromomethane	Bromodichloromethane	Amitraz	Bifenthrin	Atrazine	Dinoseb	Diuron	Fluometuron	Hexazinone	Metolachlor	
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
EQL	0.001	0.001	0.001	0.005	0.001	0.001	0.0001	0.00005	0.0001	0.002	0.0005	0.0001	0.0004	0.0002	
DoH 2014 - Non-Potable Groundwater Use (NPUG)	0.003	0.01	2.5	2.5	2.5	2.5	0.09	0.35 <sup>13</sup>	0.2	0.2	0.7	4	3		
zz ANZG (2018) Freshwater 99% toxicant DGVs	0.04	0.005		0.37					0.0007					0.000084	

Field ID	Date	1,4-dichlorobenzene	Chlorobenzene	Dibromochloromethane	Chloroform	Tribromomethane	Bromodichloromethane	Amitraz	Bifenthrin	Atrazine	Dinoseb	Diuron	Fluometuron	Hexazinone	Metolachlor
GG01	28 Oct 2025	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.0001	<0.00005	<0.0001	<0.002	<0.0005	<0.0001	<0.0004	<0.0002
GG2	31 Oct 2025	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.0001	<0.00005	<0.0001	<0.002	<0.0005	<0.0001	<0.0004	<0.0002
GG03	27 Oct 2025	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.0001	<0.00005	<0.0001	<0.002	<0.0005	<0.0001	<0.0004	<0.0002
GG4A	31 Oct 2025	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.0001	<0.00005	<0.0001	<0.002	<0.0005	<0.0001	<0.0004	<0.0002
GG05	28 Oct 2025	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.0001	<0.00005	<0.0001	<0.002	<0.0005	<0.0001	<0.0004	<0.0002
GG06	28 Oct 2025	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.0001	<0.00005	<0.0001	<0.002	<0.0005	<0.0001	<0.0004	<0.0002
GG07	27 Oct 2025	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.0001	<0.00005	<0.0001	<0.002	<0.0005	<0.0001	<0.0004	<0.0002



	Herbicides & Fungicides								Herbicides		Fungicides		Organic Sulfur Compounds			
	Molinate	Propazine	Simazine	Terbutyn	Trifluralin	Chlorothalonil	Propiconazole	Fipronil	Diifop-methyl	Prometryn	Systhane	Vinclozolin	Carbon disulfide	Phosphorus		
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		
EQL	0.0001	0.0001	0.0001	0.0001	0.00001	0.00001	0.0004	0.00002	0.0001	0.0001	0.0004	0.00002	0.001	0.01		
DoH 2014 - Non-Potable Groundwater Use (NPUG)	0.04	0.5	0.2	4	0.9	0.5	1	0.007								
zz ANZG (2018) Freshwater 99% toxicant DGVs	0.0001		0.0002		0.0026											
Field ID	Date															
GG01	28 Oct 2025		<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.0004	<0.00002	<0.0001	<0.0001	<0.0004	<0.00002	<0.001	0.01
GG2	31 Oct 2025		<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.0004	<0.00002	<0.0001	<0.0001	<0.0004	<0.00002	<0.001	0.14
GG03	27 Oct 2025		<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.0004	<0.00002	<0.0001	<0.0001	<0.0004	<0.00002	<0.001	0.08
GG4A	31 Oct 2025		<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.0004	<0.00002	<0.0001	<0.0001	<0.0004	<0.00002	<0.001	0.12
GG05	28 Oct 2025		<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.0004	<0.00002	<0.0001	<0.0001	<0.0004	<0.00002	<0.001	0.02
GG06	28 Oct 2025		<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.0004	<0.00002	<0.0001	<0.0001	<0.0004	<0.00002	<0.001	0.04
GG07	27 Oct 2025		<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.0004	<0.00002	<0.0001	<0.0001	<0.0004	<0.00002	<0.001	0.18



	Non-Metallic Inorganics						Major Cations				Major Anions				
	Ammonia as N	Nitrate (as N)	Nitrite (as N)	Nitrite + Nitrate as N	Nitrogen (Total)	Kjeldahl Nitrogen Total	Calcium	Potassium	Magnesium	Sodium	Alkalinity (Carbonate as CaCO3)	Alkalinity (Hydroxide) as CaCO3	Alkalinity (total) as CaCO3	Alkalinity (Bicarbonate as CaCO3)	
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
EQL	0.02	0.01	0.01	0.01	0.2	0.2	0.5	0.5	0.5	0.5	5	5	5	5	
DoH 2014 - Non-Potable Groundwater Use (NPUG)	0.5	112.9	9.2												
zz ANZG (2018) Freshwater 99% toxicant DGVs	0.32	1													
Field ID	Date														
GG01	28 Oct 2025	0.22	0.15	<0.01	0.15	0.3	<0.2	21	6.6	77	470	<5	<5	8.4	8.4
GG2	31 Oct 2025	<0.02	5.1	<0.01	5.1	5.1	<0.2	1.2	1.1	3.4	36	<5	<5	8.4	8.4
GG03	27 Oct 2025	0.13	<0.01	<0.01	<0.01	0.3	0.3	2.6	4.9	13	160	<5	<5	38	38
GG4A	31 Oct 2025	0.09	4.7	<0.01	4.7	5.8	1.1	2.0	1.7	4.8	45	<5	<5	<5	<5
GG05	28 Oct 2025	<0.02	0.04	<0.01	0.04	<0.2	<0.2	0.7	1.5	3.9	52	<5	<5	6.0	6.0
GG06	28 Oct 2025	0.21	<0.01	<0.01	<0.01	0.3	0.3	4.4	4.9	23	230	<5	<5	27	27
GG07	27 Oct 2025	<0.02	2.6	<0.01	2.6	3.2	0.6	2.8	2.1	12	69	<5	<5	12	12



			Ionic Balance	Other				Pesticides
	Chloride (filtered)	Sulphate (filtered)	Electrical Conductivity (Lab)	COD	TDS	TOC	Tebuconazole	Bromophos
	mg/L	mg/L	ds/m	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	5	1	0.01	25	5	5	0.0004	0.000005
DoH 2014 - Non-Potable Groundwater Use (NPUG)	250	1,000					1	
zz ANZG (2018) Freshwater 99% toxicant DGVs								

Field ID	Date								
GG01	28 Oct 2025	420	150	1.6	42	940	13	<0.0004	<0.000005
GG2	31 Oct 2025	37	6.8	0.2	<25	110	<5	<0.0004	<0.000005
GG03	27 Oct 2025	240	28	0.89	<25	470	10	<0.0004	<0.000005
GG4A	31 Oct 2025	59	11	0.25	<25	120	<5	<0.0004	<0.000005
GG05	28 Oct 2025	89	15	0.32	<25	230	7.0	<0.0004	<0.000005
GG06	28 Oct 2025	240	31	0.82	<25	460	14	<0.0004	<0.000005
GG07	27 Oct 2025	130	9.5	0.48	49	260	<100	<0.0004	<0.000005



Field ID	Matrix Type	Date	GG01	QC01	RPD	GG01	QC02	RPD
			Water	Water		Water	Water	
			28 Oct 2025	28 Oct 2025		28 Oct 2025	28 Oct 2025	
Lab Report Number			1285927	1285927		1285927	EP2518001	
Unit	EQL							
NA								
Carbophenothion	mg/L	0.0002	-	-	-	-	<0.0002	-
<b>Metals &amp; Metalloids</b>								
Aluminium (filtered)	mg/L	0.01	<0.05	<0.05	0	<0.05	<0.01	0
Arsenic (filtered)	mg/L	0.001	0.008	0.009	12	0.008	0.009	12
Cadmium (filtered)	mg/L	0.0001	<0.0001	<0.0001	0	<0.0001	<0.0001	0
Chromium (III+VI) (filtered)	mg/L	0.001	0.002	0.002	0	0.002	0.002	0
Copper (filtered)	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.001	0
Iron	mg/L	0.01	46	44	4	46	51.9	12
Lead (filtered)	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.001	0
Manganese (filtered)	mg/L	0.001	0.041	0.042	2	0.041	0.037	10
Mercury (filtered)	mg/L	0.0001	<0.0001	<0.0001	0	<0.0001	<0.0001	0
Nickel (filtered)	mg/L	0.001	0.002	0.002	0	0.002	0.002	0
Selenium (filtered)	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.001	0
Zinc (filtered)	mg/L	0.005	0.008	0.011	27	0.008	<0.005	46
<b>TPHs (NEPC 1999)</b>								
C6-C9 Fraction	mg/L	0.02	<0.02	<0.02	0	<0.02	<0.02	0
C10-C14 Fraction	mg/L	0.02	<0.02	<0.02	0	<0.02	<0.05	0
C15-C28 Fraction	mg/L	0.04	<0.04	<0.04	0	<0.04	<0.10	0
C29-C36 Fraction	mg/L	0.04	<0.04	<0.04	0	<0.04	<0.05	0
C10-C36 Fraction (Sum of Total)	mg/L	0.04	<0.04	<0.04	0	<0.04	<0.05	0
<b>TRHs (NEPC 2013)</b>								
C6-C10	mg/L	0.02	<0.02	<0.02	0	<0.02	<0.02	0
C10-C16	mg/L	0.02	<0.02	<0.02	0	<0.02	<0.10	0
C16-C34	mg/L	0.05	<0.05	<0.05	0	<0.05	<0.10	0
C34-C40	mg/L	0.05	<0.05	<0.05	0	<0.05	<0.10	0
C10-C40 (Sum of total)	mg/L	0.05	<0.05	<0.05	0	<0.05	<0.10	0
F1 (C6-C10 minus BTEX)	mg/L	0.02	<0.02	<0.02	0	<0.02	<0.02	0
F2 (C10-C16 less Naphthalene)	mg/L	0.02	<0.02	<0.02	0	<0.02	<0.10	0
<b>BTEXN</b>								
Benzene	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.001	0
Toluene	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.002	0
Ethylbenzene	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.002	0
Xylene (o)	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.002	0
Xylene (m & p)	mg/L	0.002	<0.002	<0.002	0	<0.002	<0.002	0
Xylene Total	mg/L	0.002	<0.003	<0.003	0	<0.003	<0.002	0
Total BTEX	mg/L	0.001	-	-	-	-	<0.001	-
Naphthalene_VOC	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
<b>PAH</b>								
2-Methylnaphthalene	mg/L	0.00001	<0.00001	<0.00001	0	<0.00001	-	-
Acenaphthene	mg/L	0.00001	<0.00001	<0.00001	0	<0.00001	<0.00002	0
Acenaphthylene	mg/L	0.00001	<0.00001	<0.00001	0	<0.00001	<0.00002	0
Anthracene	mg/L	0.00001	<0.00001	<0.00001	0	<0.00001	<0.00002	0
Benz(a)anthracene	mg/L	0.00001	<0.00001	<0.00001	0	<0.00001	<0.00002	0
Benzo(a)pyrene	mg/L	0.000005	<0.00001	<0.00001	0	<0.00001	<0.000005	0
Benzo(a)pyrene TEQ calc (Zero)	mg/L	0.000005	-	-	-	-	<0.000005	-
Benzo(b)fluoranthene	mg/L	0.00001	<0.00001	<0.00001	0	<0.00001	-	-
Benzo(b,j)fluoranthene	mg/L	0.00002	-	-	-	-	<0.00002	-
Benzo(g,h,i)perylene	mg/L	0.00002	<0.00002	<0.00002	0	<0.00002	<0.00002	0
Benzo(k)fluoranthene	mg/L	0.00001	<0.00001	<0.00001	0	<0.00001	<0.00002	0
Chrysene	mg/L	0.00001	<0.00001	<0.00001	0	<0.00001	<0.00002	0
Dibenz(a,h)anthracene	mg/L	0.00002	<0.00002	<0.00002	0	<0.00002	<0.00002	0
Fluoranthene	mg/L	0.00001	<0.00001	<0.00001	0	<0.00001	<0.00002	0
Fluorene	mg/L	0.00001	<0.00001	<0.00001	0	<0.00001	<0.00002	0
Indeno(1,2,3-c,d)pyrene	mg/L	0.00002	<0.00002	<0.00002	0	<0.00002	<0.00002	0
Naphthalene	mg/L	0.00002	-	-	-	-	<0.00002	-
Naphthalene - PAH	mg/L	0.00001	<0.00001	<0.00001	0	<0.00001	-	-
Phenanthrene	mg/L	0.00001	<0.00001	<0.00001	0	<0.00001	<0.00002	0
Pyrene	mg/L	0.00001	<0.00001	<0.00001	0	<0.00001	<0.00002	0
PAHs (Sum of total)	mg/L	0.000005	-	-	-	-	<0.000005	-
<b>Organochlorine Pesticides</b>								
Pentachlorophenol	mg/L	0.00005	<0.001	<0.001	0	<0.001	<0.00005	0
2,4-DDT	mg/L	0.000001	<0.000001	<0.000001	0	<0.000001	-	-
4,4-DDE	mg/L	0.000001	<0.000001	<0.000001	0	<0.000001	<0.000010	0
a-BHC	mg/L	0.000001	<0.000001	<0.000001	0	<0.000001	<0.000010	0
b-BHC	mg/L	0.000001	<0.000001	<0.000001	0	<0.000001	<0.000010	0
d-BHC	mg/L	0.000001	<0.000001	<0.000001	0	<0.000001	<0.000010	0
g-BHC (Lindane)	mg/L	0.000001	<0.000001	<0.000001	0	<0.000001	<0.000010	0
Aldrin	mg/L	0.000001	<0.000001	<0.000001	0	<0.000001	<0.000010	0
Dieldrin	mg/L	0.000001	<0.000001	<0.000001	0	<0.000001	<0.000010	0
Chlordane	mg/L	0.000002	<0.000002	<0.000002	0	<0.000002	<0.000010	0
Chlordane (cis)	mg/L	0.00001	-	-	-	-	<0.000010	-
Chlordane (trans)	mg/L	0.00001	-	-	-	-	<0.000010	-
DDT	mg/L	0.000001	<0.000001	<0.000001	0	<0.000001	<0.000010	0
DDD	mg/L	0.000001	<0.000001	<0.000001	0	<0.000001	<0.000010	0
DDT+DDE+DDD	mg/L	0.00001	-	-	-	-	<0.000010	-
Endosulfan	mg/L	0.00001	-	-	-	-	<0.000010	-
Endosulfan I	mg/L	0.000001	<0.000001	<0.000001	0	<0.000001	<0.000010	0
Endosulfan II	mg/L	0.000001	<0.000001	<0.000001	0	<0.000001	<0.000010	0
Endosulfan sulphate	mg/L	0.000001	<0.000001	<0.000001	0	<0.000001	<0.000010	0
Endrin	mg/L	0.00001	<0.00001	<0.00001	0	<0.00001	<0.000010	0
Endrin aldehyde	mg/L	0.00001	-	-	-	-	<0.000010	-
Endrin ketone	mg/L	0.00001	-	-	-	-	<0.000010	-
Heptachlor	mg/L	0.000001	<0.000001	<0.000001	0	<0.000001	<0.000005	0
Heptachlor Epoxide	mg/L	0.000001	<0.000001	<0.000001	0	<0.000001	<0.000010	0
Hexachlorobenzene	mg/L	0.000001	<0.000001	<0.000001	0	<0.000001	<0.000010	0
Methoxychlor	mg/L	0.00001	<0.00002	<0.00002	0	<0.00002	<0.000010	0
Oxychlorane	mg/L	0.000001	<0.000001	<0.000001	0	<0.000001	<0.000010	0
Trichlorfon	mg/L	0.00002	-	-	-	-	<0.00002	-
<b>Organophosphorus Pesticides</b>								
Acephate	mg/L	0.0005	-	-	-	-	<0.0005	-
Azinophos methyl	mg/L	0.00002	<0.001	<0.001	0	<0.001	<0.00002	0
Azinophos Ethyl	mg/L	0.00002	-	-	-	-	<0.00002	-
Bensulfide	mg/L	0.0001	-	-	-	-	<0.0001	-
Bolstar (Sulprofos)	mg/L	0.00005	-	-	-	-	<0.00005	-
Bromophos-ethyl	mg/L	0.0001	-	-	-	-	<0.00010	-
Chlorfenvinphos	mg/L	0.00002	-	-	-	-	<0.00002	-
Chlorpyrifos	mg/L	0.000005	<0.000005	<0.000005	0	<0.000005	<0.00002	0
Chlorpyrifos-methyl	mg/L	0.0002	-	-	-	-	<0.0002	-
Coumaphos	mg/L	0.00001	-	-	-	-	<0.00001	-
Demeton-O	mg/L	0.00002	-	-	-	-	<0.00002	-
Demeton-O & Demeton-S	mg/L	0.00002	-	-	-	-	<0.00002	-
Demeton-S	mg/L	0.00002	-	-	-	-	<0.00002	-
Diazinon	mg/L	0.00001	<0.00001	<0.00001	0	<0.00001	<0.00001	0
Dichlorvos	mg/L	0.0002	-	-	-	-	<0.00020	-
Dimethoate	mg/L	0.00002	<0.0001	<0.0001	0	<0.0001	<0.00002	0
Disulfoton	mg/L	0.00005	-	-	-	-	<0.00005	-
EPN	mg/L	0.00005	-	-	-	-	<0.00005	-
Ethion	mg/L	0.00001	<0.00001	<0.00001	0	<0.00001	<0.00002	0
Ethoprop	mg/L	0.00001	-	-	-	-	<0.00001	-
Fenitrothion	mg/L	0.00001	<0.00001	<0.00001	0	<0.00001	<0.00002	0
Fensulfathion	mg/L	0.00001	-	-	-	-	<0.00001	-
Fenthion	mg/L	0.00005	-	-	-	-	<0.00005	-
Malathion	mg/L	0.00001	<0.00001	<0.00001	0	<0.00001	<0.00002	0
Methidathion	mg/L	0.0001	-	-	-	-	<0.0001	-
Methyl parathion	mg/L	0.00002	<0.00002	<0.00002	0	<0.00002	<0.00005	0
Mevinphos (Phosdrin)	mg/L	0.00002	-	-	-	-	<0.00002	-
Monocrotophos	mg/L	0.00002	-	-	-	-	<0.00002	-
Omethoate	mg/L	0.00001	-	-	-	-	<0.00001	-
Phorate	mg/L	0.0001	-	-	-	-	<0.0001	-
Pirimiphos-methyl	mg/L	0.00001	-	-	-	-	<0.00001	-
Prothiofos	mg/L	0.0001	-	-	-	-	<0.0001	-



Field ID	Matrix Type	Date	GG01	QC01	RPD	GG01	QC02	RPD
			Water	Water		Water	Water	
			28 Oct 2025	28 Oct 2025		28 Oct 2025	28 Oct 2025	
Lab Report Number	Unit	EQL	1285927	1285927		1285927	EP2518001	
1,1,2-trichloroethane	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
1,1-dichloroethane	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
1,2,3-trichloropropane	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
1,2-dibromo-3-chloropropane	mg/L	0.005	-	-	-	-	<0.005	-
1,2-dichloroethane	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
1,2-dichloropropane	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
1,3-dichloropropane	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
2,2-dichloropropane	mg/L	0.005	-	-	-	-	<0.005	-
Bromochloromethane	mg/L	0.001	<0.001	<0.001	0	<0.001	-	-
Carbon tetrachloride	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
Chloroethane	mg/L	0.005	<0.005	<0.005	0	<0.005	<0.05	0
Chloromethane	mg/L	0.005	<0.005	<0.005	0	<0.005	<0.05	0
Dichlorodifluoromethane	mg/L	0.005	<0.005	<0.005	0	<0.005	<0.05	0
Dichloromethane	mg/L	0.005	<0.005	<0.005	0	<0.005	-	-
Pentachloroethane	mg/L	0.005	-	-	-	-	<0.005	-
Trichlorofluoromethane	mg/L	0.005	<0.005	<0.005	0	<0.005	<0.05	0
<b>Chlorinated Alkenes</b>								
1,1-dichloroethene	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
1,1-dichloropropene	mg/L	0.005	-	-	-	-	<0.005	-
2-chlorotoluene	mg/L	0.005	-	-	-	-	<0.005	-
3-chloropropene	mg/L	0.001	<0.001	<0.001	0	<0.001	-	-
4-chlorotoluene	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
cis-1,2-dichloroethene	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
cis-1,3-dichloropropene	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
cis-1,4-Dichloro-2-butene	mg/L	0.005	-	-	-	-	<0.005	-
Tetrachloroethene	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
trans-1,2-dichloroethene	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
trans-1,3-dichloropropene	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
trans-1,4-Dichloro-2-butene	mg/L	0.005	-	-	-	-	<0.005	-
Trichloroethene	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
Vinyl Chloride	mg/L	0.005	<0.005	<0.005	0	<0.005	<0.05	0
<b>Semivolatile Organic Compounds</b>								
Hexachlorophene	mg/L	0.0001	-	-	-	-	<0.0001	-
<b>Solvents</b>								
Acetone	mg/L	0.005	<0.005	<0.005	0	<0.005	-	-
<b>Polychlorinated Biphenyls</b>								
Arochlor 1016	mg/L	0.000005	-	-	-	-	<0.000005	-
Arochlor 1221	mg/L	0.000005	-	-	-	-	<0.000005	-
Arochlor 1232	mg/L	0.000005	-	-	-	-	<0.000005	-
Arochlor 1242	mg/L	0.000005	-	-	-	-	<0.000005	-
Arochlor 1248	mg/L	0.000005	-	-	-	-	<0.000005	-
Arochlor 1254	mg/L	0.000005	-	-	-	-	<0.000005	-
Arochlor 1260	mg/L	0.000005	-	-	-	-	<0.000005	-
PCBs (Sum of total)	mg/L	0.000005	<0.00002	<0.00002	0	<0.00002	<0.000005	0
<b>Phenols</b>								
2,3,4,6-tetrachlorophenol	mg/L	0.0001	-	-	-	-	<0.0001	-
2,4,5-trichlorophenol	mg/L	0.0001	<0.001	<0.001	0	<0.001	<0.0001	0
2,4,6-trichlorophenol	mg/L	0.0001	<0.001	<0.001	0	<0.001	<0.0001	0
2,4-dichlorophenol	mg/L	0.0001	<0.001	<0.001	0	<0.001	<0.0001	0
2,4-dimethylphenol	mg/L	0.0001	<0.001	<0.001	0	<0.001	<0.0001	0
2,4-dinitrophenol	mg/L	0.001	<0.001	<0.001	0	<0.001	-	-
2,6-dichlorophenol	mg/L	0.0001	<0.001	<0.001	0	<0.001	<0.0001	0
2-chlorophenol	mg/L	0.00005	<0.0001	<0.0001	0	<0.0001	<0.00005	0
2-Methylphenol	mg/L	0.0001	<0.001	<0.001	0	<0.001	<0.0001	0
2-nitrophenol	mg/L	0.0001	<0.001	<0.001	0	<0.001	<0.0001	0
3&4-Methylphenol (m&p-cresol)	mg/L	0.001	<0.001	<0.001	0	<0.001	-	-
3-Methylphenol	mg/L	0.0001	-	-	-	-	<0.0001	-
4,6-Dinitro-2-methylphenol	mg/L	0.001	<0.001	<0.001	0	<0.001	-	-
4,6-Dinitro-o-cyclohexyl phenol	mg/L	0.003	<0.003	<0.003	0	<0.003	-	-
4-Chloro-3-methylphenol	mg/L	0.00005	<0.0001	<0.0001	0	<0.0001	<0.00005	0
4-methylphenol	mg/L	0.0001	-	-	-	-	<0.0001	-
4-nitrophenol	mg/L	0.0001	<0.001	<0.001	0	<0.001	<0.0001	0
Cresol Total	mg/L	0.01	<0.01	<0.01	0	<0.01	-	-
Phenol	mg/L	0.0001	<0.001	<0.001	0	<0.001	<0.0001	0
Tetrachlorophenols	mg/L	0.001	<0.001	<0.001	0	<0.001	-	-
Phenols (Total Halogenated)	mg/L	0.1	<0.01	<0.01	0	<0.01	-	-
Phenols (Total Non Halogenated)	mg/L	0.1	<0.1	<0.1	0	<0.1	-	-
<b>MAH</b>								
1,2,4-trimethylbenzene	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
1,3,5-trimethylbenzene	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
n-butylbenzene	mg/L	0.005	-	-	-	-	<0.005	-
n-propylbenzene	mg/L	0.005	-	-	-	-	<0.005	-
p-isopropyltoluene	mg/L	0.005	-	-	-	-	<0.005	-
sec-butylbenzene	mg/L	0.005	-	-	-	-	<0.005	-
Styrene	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
tert-butylbenzene	mg/L	0.005	-	-	-	-	<0.005	-
Total MAH	mg/L	0.003	<0.003	<0.003	0	<0.003	-	-
Bromobenzene	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
Isopropylbenzene	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
<b>Miscellaneous Hydrocarbons</b>								
1,2-dibromoethane	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
Bromomethane	mg/L	0.005	<0.005	<0.005	0	<0.005	<0.05	0
Dibromomethane	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
Iodomethane	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
Vinyl Acetate	mg/L	0.05	-	-	-	-	<0.05	-
2-Hexanone (MBK)	mg/L	0.05	-	-	-	-	<0.05	-
4-Methyl-2-pentanone	mg/L	0.005	<0.005	<0.005	0	<0.005	<0.05	0
Methyl Ethyl Ketone	mg/L	0.005	<0.005	<0.005	0	<0.005	<0.05	0
<b>Chlorinated Benzenes</b>								
1,2,3-trichlorobenzene	mg/L	0.005	-	-	-	-	<0.005	-
1,2,4-trichlorobenzene	mg/L	0.005	-	-	-	-	<0.005	-
1,2-Dichlorobenzene	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
1,3-dichlorobenzene	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
1,4-dichlorobenzene	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
Chlorobenzene	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
<b>Trihalomethanes</b>								
Dibromochloromethane	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
Chloroform	mg/L	0.005	<0.005	<0.005	0	<0.005	<0.005	0
Tribromomethane	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
Bromodichloromethane	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
<b>Carbamate &amp; Other Pesticides</b>								
Amtraz	mg/L	0.0001	<0.0001	<0.0001	0	<0.0001	-	-
Bifenthrin	mg/L	0.00005	<0.00005	<0.00005	0	<0.00005	-	-
<b>Herbicides &amp; Fungicides</b>								
Atrazine	mg/L	0.00001	<0.00001	<0.00001	0	<0.00001	<0.00001	0
Dinoseb	mg/L	0.002	<0.002	<0.002	0	<0.002	-	-
Diuron	mg/L	0.0005	<0.0005	<0.0005	0	<0.0005	-	-
Fluometuron	mg/L	0.0001	<0.0001	<0.0001	0	<0.0001	-	-
Hexazinone	mg/L	0.0004	<0.0004	<0.0004	0	<0.0004	-	-
Metolachlor	mg/L	0.0002	<0.0002	<0.0002	0	<0.0002	-	-
Molinate	mg/L	0.0001	<0.0001	<0.0001	0	<0.0001	-	-
Propazine	mg/L	0.0001	<0.0001	<0.0001	0	<0.0001	-	-
Simazine	mg/L	0.0001	<0.0001	<0.0001	0	<0.0001	-	-
Terbutryn	mg/L	0.0001	<0.0001	<0.0001	0	<0.0001	-	-
Trifluralin	mg/L	0.00001	<0.00001	<0.00001	0	<0.00001	-	-
Chlorothalonil	mg/L	0.00001	<0.00001	<0.00001	0	<0.00001	-	-
Propiconazole	mg/L	0.0004	<0.0004	<0.0004	0	<0.0004	-	-
Fipronil	mg/L	0.00002	<0.00002	<0.00002	0	<0.00002	-	-
<b>Herbicides</b>								
Diclofop-methyl	mg/L	0.0001	<0.0001	<0.0001	0	<0.0001	-	-
Prometryn	mg/L	0.0001	<0.0001	<0.0001	0	<0.0001	-	-
<b>Fungicides</b>								
Fosetyl-al	mg/L	0.01	-	-	-	-	<0.01	-
Systhane	mg/L	0.0004	<0.0004	<0.0004	0	<0.0004	-	-
Vinclozolin	mg/L	0.00002	<0.00002	<0.00002	0	<0.00002	-	-
<b>Organic Sulfur Compounds</b>								
Carbon disulfide	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0
<b>Non-Metallic Inorganics</b>								
Phosphate total (as P)	mg/L	0.01	-	-	-	-	<0.01	-
Phosphorus	mg/L	0.01	0.01	0.01	0	0.01	-	-
Ammonia as N	mg/L	0.01	0.22	0.22	0	0.22	0.19	15
Nitrate (as N)	mg/L	0.01	0.15	<0.01	175	0.15	<0.01	175
Nitrite (as N)	mg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0
Nitrite + Nitrate as N	mg/L	0.01	0.15	<0.01	175	0.15	<0.01	175
Nitrogen (Total)	mg/L	0.1	0.3	0.2	40	0.3	0.3	0
Kjeldahl Nitrogen Total	mg/L	0.1	<0.2	0.2	0	<0.2	0.3	40
<b>Major Cations</b>								
Calcium	mg/L	0.5	21	19	10	21	-	-
Calcium (filtered)	mg/L	0.5	-	-	-	-	26	-



	Unit	EQL	Field ID		RPD	Field ID		RPD
			GG01	QC01		GG01	QC02	
			Water	Water		Water	Water	
Matrix Type	Date	Lab Report Number	28 Oct 2025	28 Oct 2025	28 Oct 2025	28 Oct 2025	EP2518001	RPD
Potassium	mg/L	0.5	6.6	6.5	2	6.6	-	-
Potassium (filtered)	mg/L	0.5	-	-	-	-	7	-
Magnesium	mg/L	0.5	77	75	3	77	-	-
Magnesium (filtered)	mg/L	0.5	-	-	-	-	82	-
Sodium	mg/L	0.5	470	450	4	470	-	-
Sodium (filtered)	mg/L	0.5	-	-	-	-	475	-
<b>Major Anions</b>								
Alkalinity (Carbonate as CaCO3)	mg/L	1	<5	<5	0	<5	<1	0
Alkalinity (Hydroxide) as CaCO3	mg/L	1	<5	<5	0	<5	<1	0
Alkalinity (total) as CaCO3	mg/L	1	8.4	7.1	17	8.4	14	50
Sulphate as SO4 - Turbidimetric (filtered)	mg/L	1	-	-	-	-	292	-
Alkalinity (Bicarbonate as CaCO3)	mg/L	1	8.4	7.1	17	8.4	14	50
Chloride	mg/L	1	-	-	-	-	879	-
Chloride (filtered)	mg/L	1	420	340	21	420	-	-
Sulphate (filtered)	mg/L	1	150	120	22	150	-	-
<b>Ionic Balance</b>								
Electrical Conductivity (Lab)	dS/m	0.01	1.6	1.3	21	1.6	-	-
Ionic Balance	%	0.01	-	-	-	-	3.78	-
Cations Total	meq/L	0.01	-	-	-	-	28.9	-
Anions Total	meq/L	0.01	-	-	-	-	31.2	-
<b>Chlorinated Hydrocarbons</b>								
Hexachlorobutadiene	mg/L	0.005	-	-	-	-	<0.005	-
<b>Other</b>								
COD	mg/L	10	42	28	40	42	<10	123
TDS	mg/L	1	940	680	32	940	2,210	81
TOC	mg/L	1	13	16	21	13	7	60
Naphthalophos	mg/L	0.001	-	-	-	-	<0.0010	-
Tebuconazole	mg/L	0.0004	<0.0004	<0.0004	0	<0.0004	-	-
Triazophos	mg/L	0.000005	-	-	-	-	<0.000005	-
<b>Pesticides</b>								
Bromophos	mg/L	0.000005	<0.000005	<0.000005	0	<0.000005	-	-
Sulfotepp	mg/L	0.000005	-	-	-	-	<0.000005	-

\*RPDs have only been considered where a concentration is greater than 1 times the EQL.

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 30 (1 - 10 x EQL); 30 (10 - 30 x EQL); 30 (> 30 x EQL) )

\*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory



			Field ID
			QC03
			Water
			Date
			28 Oct 2025
		Lab Report Number	1285927
	Unit	EQL	
<b>Metals &amp; Metalloids</b>			
Aluminium (filtered)	mg/L	0.05	<0.05
Arsenic (filtered)	mg/L	0.001	<0.001
Cadmium (filtered)	mg/L	0.0001	<0.0001
Chromium (III+VI) (filtered)	mg/L	0.001	<0.001
Copper (filtered)	mg/L	0.001	<0.001
Iron	mg/L	0.01	<0.01
Lead (filtered)	mg/L	0.001	<0.001
Manganese (filtered)	mg/L	0.005	<0.005
Mercury (filtered)	mg/L	0.0001	<0.0001
Nickel (filtered)	mg/L	0.001	<0.001
Selenium (filtered)	mg/L	0.001	<0.001
Zinc (filtered)	mg/L	0.005	<0.005
<b>TPHs (NEPC 1999)</b>			
C6-C9 Fraction	mg/L	0.02	<0.02
C10-C14 Fraction	mg/L	0.02	<0.02
C15-C28 Fraction	mg/L	0.04	<0.04
C29-C36 Fraction	mg/L	0.04	<0.04
C10-C36 Fraction (Sum of Total)	mg/L	0.04	<0.04
<b>TRHs (NEPC 2013)</b>			
C6-C10	mg/L	0.02	<0.02
C10-C16	mg/L	0.02	<0.02
C16-C34	mg/L	0.05	<0.05
C34-C40	mg/L	0.05	<0.05
C10-C40 (Sum of total)	mg/L	0.05	<0.05
F1 (C6-C10 minus BTEX)	mg/L	0.02	<0.02
F2 (C10-C16 less Naphthalene)	mg/L	0.02	<0.02
<b>BTEXN</b>			
Benzene	mg/L	0.001	<0.001
Toluene	mg/L	0.001	<0.001
Ethylbenzene	mg/L	0.001	<0.001
Xylene (o)	mg/L	0.001	<0.001
Xylene (m & p)	mg/L	0.002	<0.002
Xylene Total	mg/L	0.003	<0.003
Naphthalene_VOC	mg/L	0.001	<0.001
<b>PAH</b>			
2-Methylnaphthalene	mg/L	0.00001	<0.00001
Acenaphthene	mg/L	0.00001	<0.00001
Acenaphthylene	mg/L	0.00001	<0.00001
Anthracene	mg/L	0.00001	<0.00001
Benz(a)anthracene	mg/L	0.00001	<0.00001
Benzo(a)pyrene	mg/L	0.00001	<0.00001
Benzo(b)fluoranthene	mg/L	0.00001	<0.00001
Benzo(g,h,i)perylene	mg/L	0.00002	<0.00002
Benzo(k)fluoranthene	mg/L	0.00001	<0.00001
Chrysene	mg/L	0.00001	<0.00001
Dibenz(a,h)anthracene	mg/L	0.00002	<0.00002
Fluoranthene	mg/L	0.00001	<0.00001
Fluorene	mg/L	0.00001	<0.00001
Indeno(1,2,3-c,d)pyrene	mg/L	0.00002	<0.00002
Naphthalene - PAH	mg/L	0.00001	<0.00001
Phenanthrene	mg/L	0.00001	<0.00001
Pyrene	mg/L	0.00001	<0.00001
<b>Organochlorine Pesticides</b>			
Pentachlorophenol	mg/L	0.001	<0.001
2,4-DDT	mg/L	0.000001	<0.000001
4,4-DDE	mg/L	0.000001	<0.000001
a-BHC	mg/L	0.000001	<0.000001
b-BHC	mg/L	0.000001	<0.000001
d-BHC	mg/L	0.000001	<0.000001
g-BHC (Lindane)	mg/L	0.000001	<0.000001
Aldrin	mg/L	0.000001	<0.000001
Dieldrin	mg/L	0.000001	<0.000001
Chlordane	mg/L	0.000002	<0.000002
DDT	mg/L	0.000001	<0.000001
DDD	mg/L	0.000001	<0.000001
Endosulfan I	mg/L	0.000001	<0.000001
Endosulfan II	mg/L	0.000001	<0.000001
Endosulfan sulphate	mg/L	0.000001	<0.000001
Endrin	mg/L	0.00001	<0.00001
Heptachlor	mg/L	0.000001	<0.000001
Heptachlor Epoxide	mg/L	0.000001	<0.000001
Hexachlorobenzene	mg/L	0.000001	<0.000001
Methoxychlor	mg/L	0.00002	<0.00002
Oxychlordane	mg/L	0.000001	<0.000001
<b>Organophosphorus Pesticides</b>			
Azinphos methyl	mg/L	0.001	<0.001
Chlorpyrifos	mg/L	0.000005	<0.000005
Diazinon	mg/L	0.00001	<0.00001
Dimethoate	mg/L	0.0001	<0.0001
Ethion	mg/L	0.00001	<0.00001
Fenitrothion	mg/L	0.00001	<0.00001
Malathion	mg/L	0.00001	<0.00001
Methyl parathion	mg/L	0.00002	<0.00002
Fenamiphos	mg/L	0.001	<0.001
Parathion	mg/L	0.00002	<0.00002
<b>Chlorinated Alkanes</b>			
1,1,1,2-tetrachloroethane	mg/L	0.001	<0.001
1,1,1-trichloroethane	mg/L	0.001	<0.001
1,1,2,2-tetrachloroethane	mg/L	0.001	<0.001
1,1,2-trichloroethane	mg/L	0.001	<0.001
1,1-dichloroethane	mg/L	0.001	<0.001



			Field ID
			QC03
			Water
			Date
			28 Oct 2025
		Lab Report Number	1285927
	Unit	EQL	
1,2,3-trichloropropane	mg/L	0.001	<0.001
1,2-dichloroethane	mg/L	0.001	<0.001
1,2-dichloropropane	mg/L	0.001	<0.001
1,3-dichloropropane	mg/L	0.001	<0.001
Bromochloromethane	mg/L	0.001	<0.001
Carbon tetrachloride	mg/L	0.001	<0.001
Chloroethane	mg/L	0.005	<0.005
Chloromethane	mg/L	0.005	<0.005
Dichlorodifluoromethane	mg/L	0.005	<0.005
Dichloromethane	mg/L	0.005	<0.005
Trichlorofluoromethane	mg/L	0.005	<0.005
Chlorinated Alkenes			
1,1-dichloroethene	mg/L	0.001	<0.001
3-chloropropene	mg/L	0.001	<0.001
4-chlorotoluene	mg/L	0.001	<0.001
cis-1,2-dichloroethene	mg/L	0.001	<0.001
cis-1,3-dichloropropene	mg/L	0.001	<0.001
Tetrachloroethene	mg/L	0.001	<0.001
trans-1,2-dichloroethene	mg/L	0.001	<0.001
trans-1,3-dichloropropene	mg/L	0.001	<0.001
Trichloroethene	mg/L	0.001	<0.001
Vinyl Chloride	mg/L	0.005	<0.005
Solvents			
Acetone	mg/L	0.005	<0.005
Polychlorinated Biphenyls			
PCBs (Sum of total)	mg/L	0.00002	<0.00002
Phenols			
2,4,5-trichlorophenol	mg/L	0.001	<0.001
2,4,6-trichlorophenol	mg/L	0.001	<0.001
2,4-dichlorophenol	mg/L	0.001	<0.001
2,4-dimethylphenol	mg/L	0.001	<0.001
2,4-dinitrophenol	mg/L	0.001	<0.001
2,6-dichlorophenol	mg/L	0.001	<0.001
2-chlorophenol	mg/L	0.001	<0.001
2-Methylphenol	mg/L	0.001	<0.001
2-nitrophenol	mg/L	0.001	<0.001
3&4-Methylphenol (m&p-cresol)	mg/L	0.001	<0.001
4,6-Dinitro-2-methylphenol	mg/L	0.001	<0.001
4,6-Dinitro-o-cyclohexyl phenol	mg/L	0.003	<0.003
4-Chloro-3-Methylphenol	mg/L	0.001	<0.001
4-nitrophenol	mg/L	0.001	<0.001
Cresol Total	mg/L	0.01	<0.01
Phenol	mg/L	0.001	<0.001
Tetrachlorophenols	mg/L	0.001	<0.001
Phenols (Total Halogenated)	mg/L	0.01	<0.001
Phenols (Total Non Halogenated)	mg/L	0.1	<0.1
MAH			
1,2,4-trimethylbenzene	mg/L	0.001	<0.001
1,3,5-trimethylbenzene	mg/L	0.001	<0.001
Styrene	mg/L	0.001	<0.001
Total MAH	mg/L	0.003	<0.003
Bromobenzene	mg/L	0.001	<0.001
Isopropylbenzene	mg/L	0.001	<0.001
Miscellaneous Hydrocarbons			
1,2-dibromoethane	mg/L	0.001	<0.001
Bromomethane	mg/L	0.005	<0.005
Dibromomethane	mg/L	0.001	<0.001
Iodomethane	mg/L	0.001	<0.001
4-Methyl-2-pentanone	mg/L	0.005	<0.005
Methyl Ethyl Ketone	mg/L	0.005	<0.005
Chlorinated Benzenes			
1,2-Dichlorobenzene	mg/L	0.001	<0.001
1,3-dichlorobenzene	mg/L	0.001	<0.001
1,4-dichlorobenzene	mg/L	0.001	<0.001
Chlorobenzene	mg/L	0.001	<0.001
Trihalomethanes			
Dibromochloromethane	mg/L	0.001	<0.001
Chloroform	mg/L	0.005	<0.005
Tribromomethane	mg/L	0.001	<0.001
Bromodichloromethane	mg/L	0.001	<0.001
Carbamate & Other Pesticides			
Amitraz	mg/L	0.0001	<0.0001
Bifenthrin	mg/L	0.00005	<0.00005
Herbicides & Fungicides			
Atrazine	mg/L	0.0001	<0.0001
Dinoseb	mg/L	0.002	<0.002
Diuron	mg/L	0.0005	<0.0005
Fluometuron	mg/L	0.0001	<0.0001
Hexazinone	mg/L	0.0004	<0.0004
Metolachlor	mg/L	0.0002	<0.0002
Molinate	mg/L	0.0001	<0.0001
Propazine	mg/L	0.0001	<0.0001
Simazine	mg/L	0.0001	<0.0001
Terbutryn	mg/L	0.0001	<0.0001
Trifluralin	mg/L	0.00001	<0.00001
Chlorothalonil	mg/L	0.00001	<0.00001
Propiconazole	mg/L	0.0004	<0.0004
Fipronil	mg/L	0.00002	<0.00002
Herbicides			
Diclofop-methyl	mg/L	0.0001	<0.0001
Prometryn	mg/L	0.0001	<0.0001
Fungicides			



			Field ID	QC03
			Matrix Type	Water
			Date	28 Oct 2025
			Lab Report Number	1285927
	Unit	EQL		
Systhane	mg/L	0.0004		<0.0004
Vinclozolin	mg/L	0.00002		<0.00002
<b>Organic Sulfur Compounds</b>				
Carbon disulfide	mg/L	0.001		<0.001
<b>Non-Metallic Inorganics</b>				
Phosphorus	mg/L	0.01		<0.01
Ammonia as N	mg/L	0.02		<0.02
Nitrate (as N)	mg/L	0.01		<0.01
Nitrite (as N)	mg/L	0.01		<0.01
Nitrite + Nitrate as N	mg/L	0.01		<0.01
Nitrogen (Total)	mg/L	0.2		<0.2
Kjeldahl Nitrogen Total	mg/L	0.2		<0.2
<b>Major Cations</b>				
Calcium	mg/L	0.5		<0.5
Potassium	mg/L	0.5		<0.5
Magnesium	mg/L	0.5		<0.5
Sodium	mg/L	0.5		<0.5
<b>Major Anions</b>				
Alkalinity (Carbonate as CaCO <sub>3</sub> )	mg/L	5		<5
Alkalinity (Hydroxide) as CaCO <sub>3</sub>	mg/L	5		<5
Alkalinity (total) as CaCO <sub>3</sub>	mg/L	5		<5
Alkalinity (Bicarbonate as CaCO <sub>3</sub> )	mg/L	5		<5
Chloride (filtered)	mg/L	5		<5
Sulphate (filtered)	mg/L	1		<1
<b>Ionic Balance</b>				
Electrical Conductivity (Lab)	dS/m	0.01		<0.01
<b>Other</b>				
COD	mg/L	25		<25
TDS	mg/L	5		8.0
TOC	mg/L	5		<5
Tebuconazole	mg/L	0.0004		<0.0004
<b>Pesticides</b>				
Bromophos	mg/L	0.000005		<0.000005

## Appendix D Laboratory Documentation

**Eurofins ARL Pty Ltd**

ABN: 91 05 0159 898

**Perth**  
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Site# 2370 & 2554

**Eurofins Environment Testing Australia Pty Ltd**

ABN: 50 005 085 521

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Site# 20794 & 2780

**Newcastle**  
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Mayfield West  
NSW 2304  
+61 2 4968 8448  
NATA# 1261  
Site# 25079

## Sample Receipt Advice

**Company name:** JBS & G Australia (WA) P/L  
**Contact name:** Admin WA  
**Project name:** FERN VIEW GME  
**Project ID:** 702121  
**Turnaround time:** 5 Day  
**Date/Time received:** Oct 29, 2025 3:10 PM  
**Eurofins reference:** 1285927

## Sample Information

- ✓ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ✓ Sample Temperature of chilled sample on the batch as recorded by Eurofins Sample Receipt : 10.6 degrees Celsius.
- ✓ All samples have been received as described on the above COC.
- ✓ COC has been completed correctly.
- ✓ Attempt to chill was evident.
- ✓ Appropriately preserved sample containers have been used.
- ✓ All samples were received in good condition.
- ✓ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ✓ Appropriate sample containers have been used.
- ✓ Sample containers for volatile analysis received with zero headspace.
- ✗ Split sample sent to requested external lab.
- ✗ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

## Notes

## Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

**Natalie Hill on phone : or by email: [Natalie.Hill@eurofinsanz.com](mailto:Natalie.Hill@eurofinsanz.com)**

Results will be delivered electronically via email to Admin WA - waadmin@jbsg.com.au.

*Note: A copy of these results will also be delivered to the general JBS & G Australia (WA) P/L email address.*



Envirolab Services (WA) Pty Ltd trading as MPL Laboratories

ABN 53 140 099 207

7-11 Catalano Road Canning Vale WA 6155

ph +61 8 9317 2505

lab@mpl.com.au

www.mpl.com.au

## Certificate of Analysis PGJ2003

### Client Details

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<b>Client</b>	Eurofins ARL Pty Ltd
<b>Contact</b>	Reports
<b>Address</b>	46-48 Banksia Rd, Welshpool, WA, 6106

### Sample Details

---

<b>Your Reference</b>	1285927
<b>Number of Samples</b>	5 Water
<b>Date Samples Received</b>	30/10/2025
<b>Date Instructions Received</b>	30/10/2025

### Analysis Details

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Please refer to the following pages for results, methodology summary and quality control data.  
Samples were analysed as received from the client. Results relate specifically to the samples as received.  
Results are reported on a dry weight basis for soils and on an as received basis for other matrices.

### Report Details

---

<b>Date Final Results Expected</b>	07/11/2025
<b>Date of Issue</b>	07/11/2025

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**Accredited for compliance with ISO/IEC 17025. Tests not covered by NATA are denoted with \*.**

### Authorisation Details

---

<b>Results Approved By</b>	Michael Kubiak, Lab Manager
<b>Laboratory Manager</b>	Michael Kubiak

# Certificate of Analysis PGJ2003

## Samples in this Report

Envirolab ID	Sample ID	Matrix	Date Sampled	Date Received
PGJ2003-01	25-Oc0089437	Water	28/10/2025	30/10/2025
PGJ2003-02	25-Oc0089438	Water	28/10/2025	30/10/2025
PGJ2003-03	25-Oc0089439	Water	28/10/2025	30/10/2025
PGJ2003-04	25-Oc0089440	Water	28/10/2025	30/10/2025
PGJ2003-05	25-Oc0089441	Water	28/10/2025	30/10/2025

# Certificate of Analysis PGJ2003

## Organophosphorus Pesticides - Low Level (Water)

Envirolab ID	Units	PQL	PGJ2003-01	PGJ2003-02	PGJ2003-03	PGJ2003-04	PGJ2003-05
Your Reference			25-Oc0089437	25-Oc0089438	25-Oc0089439	25-Oc0089440	25-Oc0089441
Date Sampled			28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025
Demeton-S-methyl	µg/L	0.020	<0.020	<0.020	<0.020	<0.020	<0.020
<i>Surrogate 4-chloro-3-nitrobenzotrifluoride</i>	%		59.2 [1]	88.1	63.1	7.08 [1]	111

# Certificate of Analysis PGJ2003

## Result Comments

Identifier	Description
[1]	Surrogate recovery was low due to sample(s) emulsifying during liquid liquid extraction.

# Certificate of Analysis PGJ2003

## Method Summary

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Method ID	Methodology Summary
ORG-025	Determination of semi-volatile organic compounds (SVOCs) by GC-MS-MS. Water samples are extracted by LLE and soils/solids/biota using DCM/Acetone/Methanol.

# Certificate of Analysis PGJ2003

## Result Definitions

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Identifier	Description
NR	Not reported
NEPM	National Environment Protection Measure
NS	Not specified
LCS	Laboratory Control Sample
RPD	Relative Percent Difference
>	Greater than
<	Less than
PQL	Practical Quantitation Limit
INS	Insufficient sample for this test
NA	Test not required
NT	Not tested
DOL	Samples rejected due to particulate overload (air filters only)
RFD	Samples rejected due to filter damage (air filters only)
RUD	Samples rejected due to uneven deposition (air filters only)
##	Indicates a laboratory acceptance criteria outlier, for further details, see Result Comments and/or QC Comments

## Quality Control Definitions

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### Blank

This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, and is determined by processing solvents and reagents in exactly the same manner as for samples.

### Surrogate Spike

Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

### LCS (Laboratory Control Sample)

This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

### Matrix Spike

A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

### Duplicate

This is the complete duplicate analysis of a sample from the process batch. The sample selected should be one where the analyte concentration is easily measurable.

# Certificate of Analysis PGJ2003

## Laboratory Acceptance Criteria

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Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria. Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction. Spikes for Physical and Aggregate Tests are not applicable. For VOCs in water samples, three vials are required for duplicate or spike analysis.

General Acceptance Criteria (GAC) - Analyte specific criteria applies for some analytes and is reflected in QC recovery tables.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% - see ELN-P05 QAQC tables for details (available on request); <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase. Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was typically insufficient in order to satisfy laboratory QA/QC protocols.

## Miscellaneous Information

---

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached. We have taken the sampling date as being the date received at the laboratory.

Two significant figures are reported for the majority of tests and with a high degree of confidence, for results <10\*PQL, the second significant figure may be in doubt i.e. has a relatively high degree of uncertainty and is provided for information only.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS where sediment/solids are included by default.

Urine Analysis - The BEI values listed are taken from the 2022 edition of *TLVs and BEIs Threshold Limits by ACGIH*.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volume(s) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

# Data Quality Assessment Summary PGJ2003

## Client Details

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<b>Client</b>	Eurofins ARL Pty Ltd
<b>Your Reference</b>	1285927
<b>Date Issued</b>	07/11/2025

## Recommended Holding Time Compliance

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No recommended holding time exceedances

## Quality Control and QC Frequency

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QC Type	Compliant	Details
Blank	Yes	No Outliers
LCS	Yes	No Outliers
Duplicates	Yes	No Outliers
Matrix Spike	Yes	No Outliers
Surrogates / Extracted Internal Standards	No	Surrogates / Extracted ISTD Outliers Exist - See detailed list below
QC Frequency	Yes	No Outliers

Surrogates/Extracted Internal Standards, Duplicates and/or Matrix Spikes are not always relevant/applicable to certain analyses and matrices. Therefore, said QC measures are deemed compliant in these situations by default. See Laboratory Acceptance Criteria for more information

# Data Quality Assessment Summary PGJ2003

## Recommended Holding Time Compliance

Analysis	Sample Number(s)	Date Sampled	Date Extracted	Date Analysed	Compliant
Demeton-S-methyl (LL)   Water	1	28/10/2025	04/11/2025	06/11/2025	Yes
	2-5	28/10/2025	04/11/2025	07/11/2025	Yes

## Outliers: Surrogate / Extracted Internal Standards

### ORG-025 | Organophosphorus Pesticides - Low Level (Matrix) | Batch BGK0380

Sample ID	Analyte	% Limits	% Recovery
PGJ2003-01	4-chloro-3-nitrobenzotrifluoride	60 - 140	59.2% [1]
PGJ2003-04	4-chloro-3-nitrobenzotrifluoride	60 - 140	7.08% [1]

# Quality Control PGJ2003

## ORG-025 | Organophosphorus Pesticides - Low Level (Water) | Batch BGK0380

Analyte	Units	PQL	Blank	DUP1	LCS %	Spike %
				PGJ2003-01 Samp   QC   RPD %		
Demeton-S-methyl	µg/L	0.020	<0.020	<0.020   <0.020   [NA]	[NA]	[NA]
<i>Surrogate</i> 4-chloro-3-nitrobenzotrifluoride	%		134	59.2 / 100	107	104

**JBS & G Australia (WA) P/**  
**Level 9 Allendale Square, 77 St George's Terrace**  
**Perth**  
**WA 6000**



**NATA Accredited**  
**Accreditation Number 2377**  
**Site Number 2370 & 2554**

Accredited for compliance with ISO/IEC 17025 – Testing  
 NATA is a signatory to the ILAC Mutual Recognition  
 Arrangement for the mutual recognition of the  
 equivalence of testing, medical testing, calibration,  
 inspection, proficiency testing scheme providers and  
 reference materials producers reports and certificates.

**Attention:** **Ben Chaine**

**Report** **1285927-W**  
 Project name **FERN VIEW GME**  
 Project ID **702121**  
 Received Date **Oct 29, 2025**

Client Sample ID			<b>GG01</b>	<b>GG05</b>	<b>GG06</b>	<b>QC01</b>
Sample Matrix			<b>Water</b>	<b>Water</b>	<b>Water</b>	<b>Water</b>
Eurofins Sample No.			<b>L25- Oc0089437</b>	<b>L25- Oc0089438</b>	<b>L25- Oc0089439</b>	<b>L25- Oc0089440</b>
Date Sampled			<b>Oct 28, 2025</b>	<b>Oct 28, 2025</b>	<b>Oct 28, 2025</b>	<b>Oct 28, 2025</b>
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C15-C28	0.04	mg/L	< 0.04	< 0.04	< 0.04	< 0.04
TRH C29-C36	0.04	mg/L	< 0.04	< 0.04	< 0.04	< 0.04
TRH C10-C36 (Total)	0.04	mg/L	< 0.04	< 0.04	< 0.04	< 0.04
<b>BTEX</b>						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	119	115	121	118
<b>Volatile Organics</b>						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone (MEK)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Propanone (Acetone)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			GG01	GG05	GG06	QC01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			L25- Oc0089437	L25- Oc0089438	L25- Oc0089439	L25- Oc0089440
Date Sampled			Oct 28, 2025	Oct 28, 2025	Oct 28, 2025	Oct 28, 2025
Test/Reference	LOR	Unit				
<b>Volatile Organics</b>						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromomethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloroform	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dichlorodifluoromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Methylene Chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Styrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichlorofluoromethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Vinyl chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Total MAH*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	119	115	121	118
Toluene-d8 (surr.)	1	%	123	126	125	126
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>						
Naphthalene <sup>N02</sup>	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
TRH >C10-C16 less Naphthalene (F2) <sup>*N01</sup>	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
<b>Phenols (Halogenated)</b>						
2-Chlorophenol	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2.4-Dichlorophenol	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2.4.5-Trichlorophenol	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2.4.6-Trichlorophenol	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2.6-Dichlorophenol	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4-Chloro-3-methylphenol	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Pentachlorophenol	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachlorophenols - Total	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Total Halogenated Phenol*	0.01	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			GG01	GG05	GG06	QC01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			L25- Oc0089437	L25- Oc0089438	L25- Oc0089439	L25- Oc0089440
Date Sampled			Oct 28, 2025	Oct 28, 2025	Oct 28, 2025	Oct 28, 2025
Test/Reference	LOR	Unit				
<b>Phenols (non-Halogenated)</b>						
2-Cyclohexyl-4.6-dinitrophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2-Methyl-4.6-dinitrophenol	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Nitrophenol	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2.4-Dimethylphenol	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2.4-Dinitrophenol	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Methylphenol (o-Cresol)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
3&4-Methylphenol (m&p-Cresol)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Total cresols*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
4-Nitrophenol	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dinoseb	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Phenol	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Phenol-d6 (surr.)	1	%	63	116	127	145
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>						
TRH >C10-C16	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C16-C34	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C34-C40	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C10-C40 (total)*	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
<b>Base Neutral Pesticides in Water</b>						
Diuron	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Prometryn	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1
Molinate	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1
Terbutryn	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1
Fenitrothion	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1
Fluometuron	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1
Chlorpyrifos	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1
Trifluralin	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1
Dimethoate	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1
Endosulfan I	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1
Fenamiphos	1	ug/L	< 1	< 1	< 1	< 1
Simazine	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1
Atrazine	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1
Endosulfan II	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1
Endosulfan Sulfate	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1
Propazine	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1
Diclofop Methyl	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1
Amitraz	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1
Tebuconazole	0.4	ug/L	< 0.4	< 0.4	< 0.4	< 0.4
Metolachlor	0.2	ug/L	< 0.2	< 0.2	< 0.2	< 0.2
Hexazinone	0.4	ug/L	< 0.4	< 0.4	< 0.4	< 0.4
Myclobutanil	0.4	ug/L	< 0.4	< 0.4	< 0.4	< 0.4
Azinphos Methyl	1	ug/L	< 1	< 1	< 1	< 1
Propiconazole	0.4	ug/L	< 0.4	< 0.4	< 0.4	< 0.4
<b>OCOP in Water</b>						
Aldrin	0.001	ug/L	< 0.001	< 0.001	< 0.001	< 0.001
alpha-BHC (HCH)	0.001	ug/L	< 0.001	< 0.001	< 0.001	< 0.001
beta-BHC (HCH)	0.001	ug/L	< 0.001	< 0.001	< 0.001	< 0.001
delta-BHC (HCH)	0.001	ug/L	< 0.001	< 0.001	< 0.001	< 0.001
Bifenthrin	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			GG01	GG05	GG06	QC01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			L25- Oc0089437	L25- Oc0089438	L25- Oc0089439	L25- Oc0089440
Date Sampled			Oct 28, 2025	Oct 28, 2025	Oct 28, 2025	Oct 28, 2025
Test/Reference	LOR	Unit				
<b>OCOP in Water</b>						
Bromophos Ethyl	0.005	ug/L	< 0.005	< 0.005	< 0.005	< 0.005
Chlordane	0.002	ug/L	< 0.002	< 0.002	< 0.002	< 0.002
Chlorothalonil	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Chlorpyrifos	0.005	ug/L	< 0.005	< 0.005	< 0.005	< 0.005
Diazinon	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Dieldrin	0.001	ug/L	< 0.001	< 0.001	< 0.001	< 0.001
Endosulfan I	0.001	ug/L	< 0.001	< 0.001	< 0.001	< 0.001
Endosulfan II	0.001	ug/L	< 0.001	< 0.001	< 0.001	< 0.001
Endosulfan Sulfate	0.001	ug/L	< 0.001	< 0.001	< 0.001	< 0.001
Endrin	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Ethion	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Fenitrothion	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Fipronil	0.02	ug/L	< 0.02	< 0.02	< 0.02	< 0.02
Hexachlorobenzene (HCB)	0.001	ug/L	< 0.001	< 0.001	< 0.001	< 0.001
Heptachlor Epoxide	0.001	ug/L	< 0.001	< 0.001	< 0.001	< 0.001
Heptachlor	0.001	ug/L	< 0.001	< 0.001	< 0.001	< 0.001
Lindane	0.001	ug/L	< 0.001	< 0.001	< 0.001	< 0.001
Malathion	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Methoxychlor	0.02	ug/L	< 0.02	< 0.02	< 0.02	< 0.02
o,p-DDT	0.001	ug/L	< 0.001	< 0.001	< 0.001	< 0.001
Oxychlordane	0.001	ug/L	< 0.001	< 0.001	< 0.001	< 0.001
p,p-DDD	0.001	ug/L	< 0.001	< 0.001	< 0.001	< 0.001
p,p-DDE	0.001	ug/L	< 0.001	< 0.001	< 0.001	< 0.001
p,p-DDT	0.001	ug/L	< 0.001	< 0.001	< 0.001	< 0.001
Parathion Ethyl	0.02	ug/L	< 0.02	< 0.02	< 0.02	< 0.02
Parathion Methyl	0.02	ug/L	< 0.02	< 0.02	< 0.02	< 0.02
Trifluralin	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Vinclozolin	0.02	ug/L	< 0.02	< 0.02	< 0.02	< 0.02
<b>Low Level PAH in Water</b>						
Naphthalene	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
2-Methylnaphthalene	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1.2.3-c.d)pyrene	0.02	ug/L	< 0.02	< 0.02	< 0.02	< 0.02
Dibenz(a,h)anthracene	0.02	ug/L	< 0.02	< 0.02	< 0.02	< 0.02
Benzo(ghi)perylene	0.02	ug/L	< 0.02	< 0.02	< 0.02	< 0.02
Total PAHs*	0.02	ug/L	< 0.02	< 0.02	< 0.02	< 0.02
<b>PCB in Water</b>						
PCB	0.02	ug/L	< 0.02	< 0.02	< 0.02	< 0.02

Client Sample ID			<b>GG01</b>	<b>GG05</b>	<b>GG06</b>	<b>QC01</b>
Sample Matrix			<b>Water</b>	<b>Water</b>	<b>Water</b>	<b>Water</b>
Eurofins Sample No.			<b>L25- Oc0089437</b>	<b>L25- Oc0089438</b>	<b>L25- Oc0089439</b>	<b>L25- Oc0089440</b>
Date Sampled			<b>Oct 28, 2025</b>	<b>Oct 28, 2025</b>	<b>Oct 28, 2025</b>	<b>Oct 28, 2025</b>
Test/Reference	LOR	Unit				
Ammonia (as N)	0.02	mg/L	0.22	< 0.02	0.21	0.22
Chemical Oxygen Demand (COD)	25	mg/L	42	< 25	< 25	28
Chloride	5	mg/L	420	89	240	340
Conductivity (at 25 °C)	10	uS/cm	1600	320	820	1300
Nitrate (as N)	0.01	mg/L	0.15	0.04	< 0.01	< 0.01
Nitrite (as N)	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
NOx (as N)	0.01	mg/L	0.15	0.04	< 0.01	< 0.01
Sulfate (as SO4)	1	mg/L	150	15	31	120
Total Dissolved Solids Dried at 180 °C ± 2 °C	5	mg/L	940	230	460	680
Total Kjeldahl Nitrogen (as N) by calculation*	0.2	mg/L	< 0.2	< 0.2	0.3	0.2
Total Nitrogen	0.2	mg/L	0.3	< 0.2	0.3	0.2
Total Organic Carbon	5	mg/L	13	7.0	14	16
Total Phosphorus	0.01	mg/L	0.01	0.02	0.04	0.01
Demeton-S-methyl*	0.02	ug/L	< 0.02	< 0.02	< 0.02	< 0.02
<b>Alkalinity (speciated)</b>						
Bicarbonate Alkalinity (as CaCO3)	5	mg/L	8.4	6.0	27	7.1
Carbonate Alkalinity (as CaCO3)	5	mg/L	< 5	< 5	< 5	< 5
Hydroxide Alkalinity (as CaCO3)	5	mg/L	< 5	< 5	< 5	< 5
Total Alkalinity (as CaCO3)	5	mg/L	8.4	6.0	27	7.1
<b>Heavy Metals</b>						
Iron	0.01	mg/L	46	1.2	5.5	44
<b>Metals M8 filtered</b>						
Arsenic (filtered)	0.001	mg/L	0.008	< 0.001	0.008	0.009
Cadmium (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Chromium (filtered)	0.001	mg/L	0.002	< 0.001	0.007	0.002
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	0.002	0.002	< 0.001	0.002
Zinc (filtered)	0.005	mg/L	0.008	< 0.005	0.008	0.011
<b>Heavy Metals (filtered)</b>						
Aluminium (filtered)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
Manganese (filtered)	0.005	mg/L	0.041	< 0.005	0.017	0.042
Selenium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
<b>Eurofins Suite B11C: Na/K/Ca/Mg</b>						
Calcium	0.5	mg/L	21	0.7	4.4	19
Magnesium	0.5	mg/L	77	3.9	23	75
Potassium	0.5	mg/L	6.6	1.5	4.9	6.5
Sodium	0.5	mg/L	470	52	230	450

<b>Client Sample ID</b>			<b>QC03</b>
<b>Sample Matrix</b>			<b>Water</b>
<b>Eurofins Sample No.</b>			<b>L25- Oc0089441</b>
<b>Date Sampled</b>			<b>Oct 28, 2025</b>
Test/Reference	LOR	Unit	
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>			
TRH C6-C9	0.02	mg/L	< 0.02
TRH C10-C14	0.02	mg/L	< 0.02
TRH C15-C28	0.04	mg/L	< 0.04
TRH C29-C36	0.04	mg/L	< 0.04
TRH C10-C36 (Total)	0.04	mg/L	< 0.04
<b>BTEX</b>			
Benzene	0.001	mg/L	< 0.001
Toluene	0.001	mg/L	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002
o-Xylene	0.001	mg/L	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003
4-Bromofluorobenzene (surr.)	1	%	113
<b>Volatile Organics</b>			
1.1-Dichloroethane	0.001	mg/L	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001
2-Butanone (MEK)	0.005	mg/L	< 0.005
2-Propanone (Acetone)	0.005	mg/L	< 0.005
4-Chlorotoluene	0.001	mg/L	< 0.001
4-Methyl-2-pentanone (MIBK)	0.005	mg/L	< 0.005
Allyl chloride	0.001	mg/L	< 0.001
Benzene	0.001	mg/L	< 0.001
Bromobenzene	0.001	mg/L	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001
Bromoform	0.001	mg/L	< 0.001
Bromomethane	0.005	mg/L	< 0.005
Carbon disulfide	0.001	mg/L	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001
Chloroethane	0.005	mg/L	< 0.005
Chloroform	0.005	mg/L	< 0.005
Chloromethane	0.005	mg/L	< 0.005
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001

<b>Client Sample ID</b>			<b>QC03</b>
<b>Sample Matrix</b>			<b>Water</b>
<b>Eurofins Sample No.</b>			<b>L25- Oc0089441</b>
<b>Date Sampled</b>			<b>Oct 28, 2025</b>
Test/Reference	LOR	Unit	
<b>Volatile Organics</b>			
Dibromochloromethane	0.001	mg/L	< 0.001
Dibromomethane	0.001	mg/L	< 0.001
Dichlorodifluoromethane	0.005	mg/L	< 0.005
Ethylbenzene	0.001	mg/L	< 0.001
Iodomethane	0.001	mg/L	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002
Methylene Chloride	0.005	mg/L	< 0.005
o-Xylene	0.001	mg/L	< 0.001
Styrene	0.001	mg/L	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001
Toluene	0.001	mg/L	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001
Trichloroethene	0.001	mg/L	< 0.001
Trichlorofluoromethane	0.005	mg/L	< 0.005
Vinyl chloride	0.005	mg/L	< 0.005
Xylenes - Total*	0.003	mg/L	< 0.003
Total MAH*	0.003	mg/L	< 0.003
4-Bromofluorobenzene (surr.)	1	%	113
Toluene-d8 (surr.)	1	%	116
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>			
Naphthalene <sup>N02</sup>	0.001	mg/L	< 0.001
TRH >C10-C16 less Naphthalene (F2)* <sup>N01</sup>	0.02	mg/L	< 0.02
TRH C6-C10	0.02	mg/L	< 0.02
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	0.02	mg/L	< 0.02
<b>Phenols (Halogenated)</b>			
2-Chlorophenol	0.001	mg/L	< 0.001
2,4-Dichlorophenol	0.001	mg/L	< 0.001
2,4,5-Trichlorophenol	0.001	mg/L	< 0.001
2,4,6-Trichlorophenol	0.001	mg/L	< 0.001
2,6-Dichlorophenol	0.001	mg/L	< 0.001
4-Chloro-3-methylphenol	0.001	mg/L	< 0.001
Pentachlorophenol	0.001	mg/L	< 0.001
Tetrachlorophenols - Total	0.001	mg/L	< 0.001
Total Halogenated Phenol*	0.01	mg/L	< 0.001
<b>Phenols (non-Halogenated)</b>			
2-Cyclohexyl-4,6-dinitrophenol	0.003	mg/L	< 0.003
2-Methyl-4,6-dinitrophenol	0.001	mg/L	< 0.001
2-Nitrophenol	0.001	mg/L	< 0.001
2,4-Dimethylphenol	0.001	mg/L	< 0.001
2,4-Dinitrophenol	0.001	mg/L	< 0.001
2-Methylphenol (o-Cresol)	0.001	mg/L	< 0.001
3&4-Methylphenol (m&p-Cresol)	0.001	mg/L	< 0.001
Total cresols*	0.01	mg/L	< 0.01
4-Nitrophenol	0.001	mg/L	< 0.001
Dinoseb	0.002	mg/L	< 0.002
Phenol	0.001	mg/L	< 0.001
Phenol-d6 (surr.)	1	%	101
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1

<b>Client Sample ID</b>			<b>QC03</b>
<b>Sample Matrix</b>			<b>Water</b>
<b>Eurofins Sample No.</b>			<b>L25- Oc0089441</b>
<b>Date Sampled</b>			<b>Oct 28, 2025</b>
Test/Reference	LOR	Unit	
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>			
TRH >C10-C16	0.02	mg/L	< 0.02
TRH >C16-C34	0.05	mg/L	< 0.05
TRH >C34-C40	0.05	mg/L	< 0.05
TRH >C10-C40 (total)*	0.05	mg/L	< 0.05
<b>Base Neutral Pesticides in Water</b>			
Diuron	0.5	ug/L	< 0.5
Prometryn	0.1	ug/L	< 0.1
Molinate	0.1	ug/L	< 0.1
Terbutryn	0.1	ug/L	< 0.1
Fenitrothion	0.1	ug/L	< 0.1
Fluometuron	0.1	ug/L	< 0.1
Chlorpyrifos	0.1	ug/L	< 0.1
Trifluralin	0.1	ug/L	< 0.1
Dimethoate	0.1	ug/L	< 0.1
Endosulfan I	0.1	ug/L	< 0.1
Fenamiphos	1	ug/L	< 1
Simazine	0.1	ug/L	< 0.1
Atrazine	0.1	ug/L	< 0.1
Endosulfan II	0.1	ug/L	< 0.1
Endosulfan Sulfate	0.1	ug/L	< 0.1
Propazine	0.1	ug/L	< 0.1
Diclofop Methyl	0.1	ug/L	< 0.1
Amitraz	0.1	ug/L	< 0.1
Tebuconazole	0.4	ug/L	< 0.4
Metolachlor	0.2	ug/L	< 0.2
Hexazinone	0.4	ug/L	< 0.4
Myclobutanil	0.4	ug/L	< 0.4
Azinphos Methyl	1	ug/L	< 1
Propiconazole	0.4	ug/L	< 0.4
<b>OCOP in Water</b>			
Aldrin	0.001	ug/L	< 0.001
alpha-BHC (HCH)	0.001	ug/L	< 0.001
beta-BHC (HCH)	0.001	ug/L	< 0.001
delta-BHC (HCH)	0.001	ug/L	< 0.001
Bifenthrin	0.05	ug/L	< 0.05
Bromophos Ethyl	0.005	ug/L	< 0.005
Chlordane	0.002	ug/L	< 0.002
Chlorothalonil	0.01	ug/L	< 0.01
Chlorpyrifos	0.005	ug/L	< 0.005
Diazinon	0.01	ug/L	< 0.01
Dieldrin	0.001	ug/L	< 0.001
Endosulfan I	0.001	ug/L	< 0.001
Endosulfan II	0.001	ug/L	< 0.001
Endosulfan Sulfate	0.001	ug/L	< 0.001
Endrin	0.01	ug/L	< 0.01
Ethion	0.01	ug/L	< 0.01
Fenitrothion	0.01	ug/L	< 0.01
Fipronil	0.02	ug/L	< 0.02
Hexachlorobenzene (HCB)	0.001	ug/L	< 0.001

<b>Client Sample ID</b>			<b>QC03</b>
<b>Sample Matrix</b>			<b>Water</b>
<b>Eurofins Sample No.</b>			<b>L25- Oc0089441</b>
<b>Date Sampled</b>			<b>Oct 28, 2025</b>
Test/Reference	LOR	Unit	
<b>OCOP in Water</b>			
Heptachlor Epoxide	0.001	ug/L	< 0.001
Heptachlor	0.001	ug/L	< 0.001
Lindane	0.001	ug/L	< 0.001
Malathion	0.01	ug/L	< 0.01
Methoxychlor	0.02	ug/L	< 0.02
o,p-DDT	0.001	ug/L	< 0.001
Oxychlorane	0.001	ug/L	< 0.001
p,p-DDD	0.001	ug/L	< 0.001
p,p-DDE	0.001	ug/L	< 0.001
p,p-DDT	0.001	ug/L	< 0.001
Parathion Ethyl	0.02	ug/L	< 0.02
Parathion Methyl	0.02	ug/L	< 0.02
Trifluralin	0.01	ug/L	< 0.01
Vinclozolin	0.02	ug/L	< 0.02
<b>Low Level PAH in Water</b>			
Naphthalene	0.01	ug/L	< 0.01
2-Methylnaphthalene	0.01	ug/L	< 0.01
Acenaphthylene	0.01	ug/L	< 0.01
Acenaphthene	0.01	ug/L	< 0.01
Fluorene	0.01	ug/L	< 0.01
Phenanthrene	0.01	ug/L	< 0.01
Anthracene	0.01	ug/L	< 0.01
Fluoranthene	0.01	ug/L	< 0.01
Pyrene	0.01	ug/L	< 0.01
Benz(a)anthracene	0.01	ug/L	< 0.01
Chrysene	0.01	ug/L	< 0.01
Benzo(b)fluoranthene	0.01	ug/L	< 0.01
Benzo(k)fluoranthene	0.01	ug/L	< 0.01
Benzo(a)pyrene	0.01	ug/L	< 0.01
Indeno(1.2.3-c.d)pyrene	0.02	ug/L	< 0.02
Dibenz(a,h)anthracene	0.02	ug/L	< 0.02
Benzo(ghi)perylene	0.02	ug/L	< 0.02
Total PAHs*	0.02	ug/L	< 0.02
<b>PCB in Water</b>			
PCB	0.02	ug/L	< 0.02
<b>Other Parameters</b>			
Ammonia (as N)	0.02	mg/L	< 0.02
Chemical Oxygen Demand (COD)	25	mg/L	< 25
Chloride	5	mg/L	< 5
Conductivity (at 25 °C)	10	uS/cm	< 10
Nitrate (as N)	0.01	mg/L	< 0.01
Nitrite (as N)	0.01	mg/L	< 0.01
NOx (as N)	0.01	mg/L	< 0.01
Sulfate (as SO4)	1	mg/L	< 1
Total Dissolved Solids Dried at 180 °C ± 2 °C	5	mg/L	8.0
Total Kjeldahl Nitrogen (as N) by calculation*	0.2	mg/L	< 0.2
Total Nitrogen	0.2	mg/L	< 0.2
Total Organic Carbon	5	mg/L	< 5
Total Phosphorus	0.01	mg/L	< 0.01
Demeton-S-methyl*	0.02	ug/L	< 0.02

<b>Client Sample ID</b>			<b>QC03</b>
<b>Sample Matrix</b>			<b>Water</b>
<b>Eurofins Sample No.</b>			<b>L25- Oc0089441</b>
<b>Date Sampled</b>			<b>Oct 28, 2025</b>
Test/Reference	LOR	Unit	
<b>Alkalinity (speciated)</b>			
Bicarbonate Alkalinity (as CaCO <sub>3</sub> )	5	mg/L	< 5
Carbonate Alkalinity (as CaCO <sub>3</sub> )	5	mg/L	< 5
Hydroxide Alkalinity (as CaCO <sub>3</sub> )	5	mg/L	< 5
Total Alkalinity (as CaCO <sub>3</sub> )	5	mg/L	< 5
<b>Heavy Metals</b>			
Iron	0.01	mg/L	< 0.01
<b>Metals M8 filtered</b>			
Arsenic (filtered)	0.001	mg/L	< 0.001
Cadmium (filtered)	0.0001	mg/L	< 0.0001
Chromium (filtered)	0.001	mg/L	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001
Nickel (filtered)	0.001	mg/L	< 0.001
Zinc (filtered)	0.005	mg/L	< 0.005
<b>Heavy Metals (filtered)</b>			
Aluminium (filtered)	0.05	mg/L	< 0.05
Manganese (filtered)	0.005	mg/L	< 0.005
Selenium (filtered)	0.001	mg/L	< 0.001
<b>Eurofins Suite B11C: Na/K/Ca/Mg</b>			
Calcium	0.5	mg/L	< 0.5
Magnesium	0.5	mg/L	< 0.5
Potassium	0.5	mg/L	< 0.5
Sodium	0.5	mg/L	< 0.5

### Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Welshpool	Oct 30, 2025	7 Days
BTEX - Method: LTM-ORG-2010 TRH C6-C40	Welshpool	Oct 30, 2025	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Welshpool	Oct 30, 2025	7 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Welshpool	Oct 30, 2025	7 Days
Volatile Organics - Method: ARL 132 - Purgeable Organics in Water by GCMS	Welshpool	Oct 30, 2025	7 Days
Base Neutral Pesticides in Water - Method: ARL042 - Base Neutral Pesticides in Water	Welshpool	Oct 30, 2025	7 Days
OCOP in Water - Method: ARL No. 002 - OCOP and PCB in Water	Welshpool	Oct 30, 2025	7 Days
Low Level PAH in Water - Method: ARL005 - Polycyclic Aromatic Hydrocarbons in Water	Welshpool	Oct 30, 2025	14 Days
PCB in Water - Method: ARL002 - OCOP and PCB in Water	Welshpool	Oct 30, 2025	14 Days
Chemical Oxygen Demand (COD) - Method: LTM-INO-4220 Determination of COD in Water	Melbourne	Oct 31, 2025	28 Days
Total Organic Carbon - Method: LTM-INO-4060 Total Organic Carbon in water and soil	Melbourne	Oct 31, 2025	28 Days
Heavy Metals - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Welshpool	Oct 30, 2025	28 Days
Metals M8 filtered - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Welshpool	Oct 30, 2025	28 Days
Heavy Metals (filtered) - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Welshpool	Oct 30, 2025	28 Days
Eurofins Suite B11C: Na/K/Ca/Mg - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Welshpool	Oct 30, 2025	180 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water by GC MSMS	Welshpool	Oct 30, 2025	14 Day
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water by GC MSMS	Welshpool	Oct 30, 2025	14 Day
Ammonia (as N) - Method: ARL303 - Ammonia in Water by Discrete Analyser	Welshpool	Oct 30, 2025	28 Days
Nitrate (as N) - Method: ARL313/319 - NOx in Water by Discrete Analyser	Welshpool	Oct 30, 2025	28 Days
Nitrite (as N) - Method: ARL311 - Nitrite in Water by Discrete Analyser	Welshpool	Oct 30, 2025	2 Days
NOx (as N) - Method: ARL313/319 - NOx in Water by Discrete Analyser	Welshpool	Oct 30, 2025	28 Days
Total Kjeldahl Nitrogen (as N) by calculation - Method: ARL No. 330 - Persulfate Method for Simultaneous Determination of TN & TP	Welshpool	Oct 29, 2025	28 Days
Total Nitrogen - Method: ARL No. 330 - Persulfate Method for Simultaneous Determination of TN & TP	Welshpool	Oct 30, 2025	28 Days
Total Phosphorus - Method: ARL308 - Total Phosphorus in Water by Discrete Analyser	Welshpool	Oct 30, 2025	28 Days
Chloride - Method: ARL305 - Chloride in Water by Discrete Analyser	Welshpool	Oct 30, 2025	28 Days
Sulfate (as SO4)	Welshpool	Oct 30, 2025	28 Days

**Description**

- Method: ARL301 - Sulfate in Water by Discrete Analyser
- Alkalinity (speciated)
- Method: LTM-INO-4250 Alkalinity by Electrometric Titration
- Conductivity (at 25 °C)
- Method: LTM-INO-4030 Conductivity
- Total Dissolved Solids Dried at 180 °C ± 2 °C
- Method: ARL No. 017 - Total Dissolved Solids

Testing Site	Extracted	Holding Time
Welshpool	Oct 30, 2025	14 Days
Welshpool	Oct 30, 2025	28 Days
Welshpool	Oct 30, 2025	7 Days



**Perth**  
 46-48 Banksia Road  
 Welshpool  
 WA 6106  
 +61 8 6253 4444  
 NATA# 2377  
 Site# 2370 & 2554

**Melbourne**  
 6 Monterey Road  
 Dandenong South  
 VIC 3175  
 +61 3 8564 5000  
 NATA# 1261  
 Site# 1254

**Geelong**  
 19/8 Lewalan Street  
 Grovedale  
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 +61 3 8564 5000  
 NATA# 1261  
 Site# 25403

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 179 Magowar Road  
 Gurraveen  
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 +61 2 9900 8400  
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**Canberra**  
 Unit 1,2 Dacre Street  
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**Brisbane**  
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**Newcastle**  
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 NATA# 1261  
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**Company Name:** JBS & G Australia (WA) P/L  
**Address:** Level 9 Allendale Square, 77 St George's Terrace  
 Perth  
 WA 6000

**Project Name:** FERN VIEW GME  
**Project ID:** 702121  
**Facility Code:**

**Order No.:**  
**Report #:** 1285927  
**Phone:** 08 9488 0115  
**Fax:**

**Received:** Oct 29, 2025 3:10 PM  
**Due:** Nov 5, 2025  
**Priority:** 5 Day  
**Contact Name:** Admin WA

**Eurofins Analytical Services Manager : Natalie Hill**

Sample Detail						Aluminium (filtered)	Chemical Oxygen Demand (COD)	Demeton-S-methyl	Iron	Manganese (filtered)	Selenium (filtered)	Total Organic Carbon	Metals M8 filtered	Phenols (Speciated)	Volatile Organics	Eurofins Suite B1	Eurofins Suite B11C: Na/K/Ca/Mg	Base Neutral Pesticides in Water	OCOP in Water	Low Level PAH in Water	PCB in Water	Total Dissolved Solids (TDS)	Eurofins Suite B19D	Eurofins Suite B11E	
<b>Perth Laboratory - NATA # 2377 Site # 2370 &amp; 2554</b>						X			X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>							X					X													
<b>External Laboratory</b>								X																	
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID																				
1	GG01	Oct 28, 2025		Water	L25-Oc0089437	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2	GG05	Oct 28, 2025		Water	L25-Oc0089438	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3	GG06	Oct 28, 2025		Water	L25-Oc0089439	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4	QC01	Oct 28, 2025		Water	L25-Oc0089440	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
5	QC03	Oct 28, 2025		Water	L25-Oc0089441	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Test Counts</b>						5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

**Internal Quality Control Review and Glossary**
**General**

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They are included in this QC report where applicable. Additional QC data may be available on request.
- Unless otherwise stated, all soil/sediment/solid results are reported on a dry weight basis.
- Unless otherwise stated, all biota/food results are reported on a wet weight basis on the edible portion.
- For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
- Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds where annotated.
- SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- Information identified in this report with **blue** colour indicates data provided by customers that may have an impact on the results.
- This report replaces any interim results previously issued.

**Holding Times**

Please refer to the 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours before sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and despite any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the sampling date; therefore, compliance with these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether, the holding time is seven days; however, for all other VOCs, such as BTEX or C6-10 TRH, the holding time is 14 days.

**Units**

<b>mg/kg:</b> milligrams per kilogram	<b>mg/L:</b> milligrams per litre	<b>ppm:</b> parts per million
<b>µg/L:</b> micrograms per litre	<b>ppb:</b> parts per billion	<b>%:</b> Percentage
<b>org/100 mL:</b> Organisms per 100 millilitres	<b>NTU:</b> Nephelometric Turbidity Units	<b>MPN/100 mL:</b> Most Probable Number of organisms per 100 millilitres
<b>CFU:</b> Colony Forming Unit	<b>Colour:</b> Pt-Co Units (CU)	

**Terms**

<b>APHA</b>	American Public Health Association
<b>CEC</b>	Cation Exchange Capacity
<b>COC</b>	Chain of Custody
<b>CP</b>	Client Parent - QC was performed on samples pertaining to this report
<b>CRM</b>	Certified Reference Material (ISO17034) - reported as percent recovery.
<b>Dry</b>	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
<b>Duplicate</b>	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
<b>LOR</b>	Limit of Reporting.
<b>LCS</b>	Laboratory Control Sample - reported as percent recovery.
<b>Method Blank</b>	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
<b>NCP</b>	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
<b>RPD</b>	Relative Percent Difference between two Duplicate pieces of analysis.
<b>SPIKE</b>	Addition of the analyte to the sample and reported as percentage recovery.
<b>SRA</b>	Sample Receipt Advice
<b>Surr - Surrogate</b>	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
<b>TBTO</b>	Tributyltin oxide ( <i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
<b>TCLP</b>	Toxicity Characteristic Leaching Procedure
<b>TEQ</b>	Toxic Equivalency Quotient or Total Equivalence
<b>QSM</b>	US Department of Defense Quality Systems Manual Version 6.0
<b>US EPA</b>	United States Environmental Protection Agency
<b>WA DWER</b>	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

**QC - Acceptance Criteria**

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is ≤30%; however, the following acceptance guidelines are equally applicable:

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

**QC Data General Comments**

- Where a result is reported as less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
- Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown are not data from your samples.
- pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
- For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
- Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

**Quality Control Results**

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Method Blank</b>							
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.02			0.02	Pass	
TRH C15-C28	mg/L	< 0.04			0.04	Pass	
TRH C29-C36	mg/L	< 0.04			0.04	Pass	
<b>Method Blank</b>							
<b>BTEX</b>							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
<b>Method Blank</b>							
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>							
Naphthalene	mg/L	< 0.001			0.001	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
<b>Method Blank</b>							
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>							
TRH >C10-C16	mg/L	< 0.02			0.02	Pass	
TRH >C16-C34	mg/L	< 0.05			0.05	Pass	
TRH >C34-C40	mg/L	< 0.05			0.05	Pass	
<b>Method Blank</b>							
<b>Base Neutral Pesticides in Water</b>							
Diuron	ug/L	< 0.5			0.5	Pass	
Prometryn	ug/L	< 0.1			0.1	Pass	
Molinate	ug/L	< 0.1			0.1	Pass	
Terbutryn	ug/L	< 0.1			0.1	Pass	
Fenitrothion	ug/L	< 0.1			0.1	Pass	
Fluometuron	ug/L	< 0.1			0.1	Pass	
Chlorpyrifos	ug/L	< 0.1			0.1	Pass	
Trifluralin	ug/L	< 0.1			0.1	Pass	
Dimethoate	ug/L	< 0.1			0.1	Pass	
Endosulfan I	ug/L	< 0.1			0.1	Pass	
Fenamiphos	ug/L	< 1			1	Pass	
Simazine	ug/L	< 0.1			0.1	Pass	
Atrazine	ug/L	< 0.1			0.1	Pass	
Endosulfan II	ug/L	< 0.1			0.1	Pass	
Endosulfan Sulfate	ug/L	< 0.1			0.1	Pass	
Propazine	ug/L	< 0.1			0.1	Pass	
Diclofop Methyl	ug/L	< 0.1			0.1	Pass	
Amitraz	ug/L	< 0.1			0.1	Pass	
Tebuconazole	ug/L	< 0.4			0.4	Pass	
Metolachlor	ug/L	< 0.2			0.2	Pass	
Hexazinone	ug/L	< 0.4			0.4	Pass	
Myclobutanil	ug/L	< 0.4			0.4	Pass	
Azinphos Methyl	ug/L	< 1			1	Pass	
Propiconazole	ug/L	< 0.4			0.4	Pass	
<b>Method Blank</b>							
<b>OCOP in Water</b>							
Aldrin	ug/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
alpha-BHC (HCH)	ug/L	< 0.001			0.001	Pass	
beta-BHC (HCH)	ug/L	< 0.001			0.001	Pass	
delta-BHC (HCH)	ug/L	< 0.001			0.001	Pass	
Bifenthrin	ug/L	< 0.05			0.05	Pass	
Bromophos Ethyl	ug/L	< 0.005			0.005	Pass	
Chlordane	ug/L	< 0.002			0.002	Pass	
Chlorothalonil	ug/L	< 0.01			0.01	Pass	
Chlorpyrifos	ug/L	< 0.005			0.005	Pass	
Diazinon	ug/L	< 0.01			0.01	Pass	
Dieldrin	ug/L	< 0.001			0.001	Pass	
Endosulfan I	ug/L	< 0.001			0.001	Pass	
Endosulfan II	ug/L	< 0.001			0.001	Pass	
Endosulfan Sulfate	ug/L	< 0.001			0.001	Pass	
Endrin	ug/L	< 0.01			0.01	Pass	
Ethion	ug/L	< 0.01			0.01	Pass	
Fenitrothion	ug/L	< 0.01			0.01	Pass	
Fipronil	ug/L	< 0.02			0.02	Pass	
Hexachlorobenzene (HCB)	ug/L	< 0.001			0.001	Pass	
Heptachlor Epoxide	ug/L	< 0.001			0.001	Pass	
Heptachlor	ug/L	< 0.001			0.001	Pass	
Lindane	ug/L	< 0.001			0.001	Pass	
Malathion	ug/L	< 0.01			0.01	Pass	
Methoxychlor	ug/L	< 0.02			0.02	Pass	
o,p-DDT	ug/L	< 0.001			0.001	Pass	
Oxychlordane	ug/L	< 0.001			0.001	Pass	
p,p-DDD	ug/L	< 0.001			0.001	Pass	
p,p-DDE	ug/L	< 0.001			0.001	Pass	
p,p-DDT	ug/L	< 0.001			0.001	Pass	
Parathion Ethyl	ug/L	< 0.02			0.02	Pass	
Parathion Methyl	ug/L	< 0.02			0.02	Pass	
Trifluralin	ug/L	< 0.01			0.01	Pass	
Vinclozolin	ug/L	< 0.02			0.02	Pass	
<b>Method Blank</b>							
<b>Low Level PAH in Water</b>							
Naphthalene	ug/L	< 0.01			0.01	Pass	
2-Methylnaphthalene	ug/L	< 0.01			0.01	Pass	
Acenaphthylene	ug/L	< 0.01			0.01	Pass	
Acenaphthene	ug/L	< 0.01			0.01	Pass	
Fluorene	ug/L	< 0.01			0.01	Pass	
Phenanthrene	ug/L	< 0.01			0.01	Pass	
Anthracene	ug/L	< 0.01			0.01	Pass	
Fluoranthene	ug/L	< 0.01			0.01	Pass	
Pyrene	ug/L	< 0.01			0.01	Pass	
Benz(a)anthracene	ug/L	< 0.01			0.01	Pass	
Chrysene	ug/L	< 0.01			0.01	Pass	
Benzo(b)fluoranthene	ug/L	< 0.01			0.01	Pass	
Benzo(k)fluoranthene	ug/L	< 0.01			0.01	Pass	
Benzo(a)pyrene	ug/L	< 0.01			0.01	Pass	
Indeno(1.2.3-c.d)pyrene	ug/L	< 0.02			0.02	Pass	
Dibenz(a,h)anthracene	ug/L	< 0.02			0.02	Pass	
Benzo(ghi)perylene	ug/L	< 0.02			0.02	Pass	
<b>Method Blank</b>							
<b>PCB in Water</b>							
PCB	ug/L	< 0.02			0.02	Pass	
<b>Method Blank</b>							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Ammonia (as N)	mg/L	< 0.02			0.02	Pass	
Chemical Oxygen Demand (COD)	mg/L	< 25			25	Pass	
Chloride	mg/L	< 5			5	Pass	
Nitrate (as N)	mg/L	< 0.01			0.01	Pass	
Nitrite (as N)	mg/L	< 0.01			0.01	Pass	
NOx (as N)	mg/L	< 0.01			0.01	Pass	
Sulfate (as SO4)	mg/L	< 1			1	Pass	
Total Dissolved Solids Dried at 180 °C ± 2 °C	mg/L	< 5			5	Pass	
Total Nitrogen	mg/L	< 0.2			0.2	Pass	
Total Phosphorus	mg/L	< 0.01			0.01	Pass	
<b>Method Blank</b>							
<b>Alkalinity (speciated)</b>							
Bicarbonate Alkalinity (as CaCO3)	mg/L	< 5			5	Pass	
Hydroxide Alkalinity (as CaCO3)	mg/L	< 5			5	Pass	
<b>Method Blank</b>							
<b>Heavy Metals</b>							
Iron	mg/L	< 0.01			0.01	Pass	
<b>Method Blank</b>							
<b>Metals M8 filtered</b>							
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium (filtered)	mg/L	< 0.0001			0.0001	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
<b>Method Blank</b>							
<b>Heavy Metals (filtered)</b>							
Aluminium (filtered)	mg/L	< 0.05			0.05	Pass	
Manganese (filtered)	mg/L	< 0.005			0.005	Pass	
Selenium (filtered)	mg/L	< 0.001			0.001	Pass	
<b>Method Blank</b>							
<b>Eurofins Suite B11C: Na/K/Ca/Mg</b>							
Calcium	mg/L	< 0.5			0.5	Pass	
Magnesium	mg/L	< 0.5			0.5	Pass	
Potassium	mg/L	< 0.5			0.5	Pass	
Sodium	mg/L	< 0.5			0.5	Pass	
<b>Method Blank</b>							
<b>Volatile Organics</b>							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.005			0.005	Pass	
2-Propanone (Acetone)	mg/L	< 0.005			0.005	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.005			0.005	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.005			0.005	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	
Chloroethane	mg/L	< 0.005			0.005	Pass	
Chloroform	mg/L	< 0.005			0.005	Pass	
Chloromethane	mg/L	< 0.005			0.005	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.001			0.001	Pass	
Dichlorodifluoromethane	mg/L	< 0.005			0.005	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
Methylene Chloride	mg/L	< 0.005			0.005	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.005			0.005	Pass	
Vinyl chloride	mg/L	< 0.005			0.005	Pass	
<b>Method Blank</b>							
<b>Phenols (Halogenated)</b>							
2-Chlorophenol	mg/L	< 0.001			0.001	Pass	
2.4-Dichlorophenol	mg/L	< 0.001			0.001	Pass	
2.4.5-Trichlorophenol	mg/L	< 0.001			0.001	Pass	
2.4.6-Trichlorophenol	mg/L	< 0.001			0.001	Pass	
2.6-Dichlorophenol	mg/L	< 0.001			0.001	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.001			0.001	Pass	
Pentachlorophenol	mg/L	< 0.001			0.001	Pass	
Tetrachlorophenols - Total	mg/L	< 0.001			0.001	Pass	
<b>Method Blank</b>							
<b>Phenols (non-Halogenated)</b>							
2-Cyclohexyl-4.6-dinitrophenol	mg/L	< 0.003			0.003	Pass	
2-Methyl-4.6-dinitrophenol	mg/L	< 0.001			0.001	Pass	
2-Nitrophenol	mg/L	< 0.001			0.001	Pass	
2.4-Dimethylphenol	mg/L	< 0.001			0.001	Pass	
2.4-Dinitrophenol	mg/L	< 0.001			0.001	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.001			0.001	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.001			0.001	Pass	
4-Nitrophenol	mg/L	< 0.001			0.001	Pass	
Dinoseb	mg/L	< 0.002			0.002	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Phenol	mg/L	< 0.001		0.001	Pass	
<b>Method Blank</b>						
Total Organic Carbon	mg/L	< 5		5	Pass	
<b>LCS - % Recovery</b>						
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>						
TRH C6-C9	%	83		70-130	Pass	
TRH C10-C14	%	93		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>BTEX</b>						
Benzene	%	101		70-130	Pass	
Toluene	%	112		70-130	Pass	
Ethylbenzene	%	112		70-130	Pass	
m&p-Xylenes	%	121		70-130	Pass	
o-Xylene	%	125		70-130	Pass	
Xylenes - Total*	%	119		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>						
Naphthalene	%	102		70-130	Pass	
TRH C6-C10	%	85		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Phenols (Halogenated)</b>						
Pentachlorophenol	%	103		25-140	Pass	
Tetrachlorophenols - Total	%	93		25-140	Pass	
<b>LCS - % Recovery</b>						
<b>Phenols (non-Halogenated)</b>						
2-Methyl-4,6-dinitrophenol	%	106		25-140	Pass	
Dinoseb	%	93		25-140	Pass	
<b>LCS - % Recovery</b>						
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>						
TRH >C10-C16	%	100		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Base Neutral Pesticides in Water</b>						
Diuron	%	92		60-120	Pass	
Prometryn	%	111		60-120	Pass	
Molinate	%	99		60-120	Pass	
Terbutryn	%	108		60-120	Pass	
Fenitrothion	%	101		60-120	Pass	
Fluometuron	%	97		60-120	Pass	
Chlorpyrifos	%	113		60-120	Pass	
Trifluralin	%	90		60-120	Pass	
Dimethoate	%	95		60-120	Pass	
Endosulfan I	%	109		60-120	Pass	
Fenamiphos	%	83		60-120	Pass	
Simazine	%	116		60-120	Pass	
Atrazine	%	87		60-120	Pass	
Endosulfan II	%	92		60-120	Pass	
Endosulfan Sulfate	%	86		60-120	Pass	
Propazine	%	90		60-120	Pass	
Diclofop Methyl	%	94		60-120	Pass	
Tebuconazole	%	82		60-120	Pass	
Metolachlor	%	111		60-120	Pass	
Hexazinone	%	110		60-120	Pass	
Myclobutanil	%	80		60-120	Pass	
Azinphos Methyl	%	101		60-120	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Propiconazole	%	82			60-120	Pass	
<b>LCS - % Recovery</b>							
<b>OCOP in Water</b>							
Aldrin	%	105			60-120	Pass	
alpha-BHC (HCH)	%	91			60-120	Pass	
beta-BHC (HCH)	%	109			60-120	Pass	
delta-BHC (HCH)	%	91			60-120	Pass	
Bifenthrin	%	105			60-120	Pass	
Bromophos Ethyl	%	83			60-120	Pass	
Chlordane	%	100			60-120	Pass	
Chlorothalonil	%	101			60-120	Pass	
Chlorpyrifos	%	113			60-120	Pass	
Dieldrin	%	104			60-120	Pass	
Endosulfan I	%	100			60-120	Pass	
Endosulfan II	%	111			60-120	Pass	
Endosulfan Sulfate	%	86			60-120	Pass	
Endrin	%	98			60-120	Pass	
Hexachlorobenzene (HCB)	%	101			60-120	Pass	
Heptachlor Epoxide	%	114			60-120	Pass	
Heptachlor	%	120			60-120	Pass	
Lindane	%	105			60-120	Pass	
Malathion	%	90			60-120	Pass	
Methoxychlor	%	104			60-120	Pass	
o,p-DDT	%	99			60-120	Pass	
Oxychlordane	%	107			60-120	Pass	
p,p-DDD	%	116			60-120	Pass	
p,p-DDE	%	91			60-120	Pass	
p,p-DDT	%	99			60-120	Pass	
Parathion Ethyl	%	82			60-120	Pass	
Trifluralin	%	90			60-120	Pass	
Vinclozolin	%	101			60-120	Pass	
<b>LCS - % Recovery</b>							
<b>Low Level PAH in Water</b>							
Naphthalene	%	80			60-120	Pass	
2-Methylnaphthalene	%	100			60-120	Pass	
Acenaphthylene	%	80			60-120	Pass	
Acenaphthene	%	85			60-120	Pass	
Fluorene	%	110			60-120	Pass	
Phenanthrene	%	87			60-120	Pass	
Anthracene	%	80			60-120	Pass	
Fluoranthene	%	90			60-120	Pass	
Pyrene	%	84			60-120	Pass	
Benz(a)anthracene	%	91			60-120	Pass	
Chrysene	%	87			60-120	Pass	
Benzo(b)fluoranthene	%	98			60-120	Pass	
Benzo(k)fluoranthene	%	90			60-120	Pass	
Benzo(a)pyrene	%	88			60-120	Pass	
Indeno(1.2.3-c.d)pyrene	%	95			60-120	Pass	
Dibenz(a,h)anthracene	%	102			60-120	Pass	
Benzo(ghi)perylene	%	112			60-120	Pass	
<b>LCS - % Recovery</b>							
Chemical Oxygen Demand (COD)	%	130			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Heavy Metals</b>							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
Iron	%	89			80-120	Pass		
<b>LCS - % Recovery</b>								
<b>Metals M8 filtered</b>								
Arsenic (filtered)	%	99			80-120	Pass		
Cadmium (filtered)	%	94			80-120	Pass		
Chromium (filtered)	%	106			80-120	Pass		
Copper (filtered)	%	102			80-120	Pass		
Lead (filtered)	%	99			80-120	Pass		
Mercury (filtered)	%	98			80-120	Pass		
Nickel (filtered)	%	102			80-120	Pass		
Zinc (filtered)	%	102			80-120	Pass		
<b>LCS - % Recovery</b>								
<b>Heavy Metals (filtered)</b>								
Aluminium (filtered)	%	107			80-120	Pass		
Manganese (filtered)	%	105			80-120	Pass		
Selenium (filtered)	%	96			80-120	Pass		
<b>LCS - % Recovery</b>								
<b>Eurofins Suite B11C: Na/K/Ca/Mg</b>								
Calcium	%	93			80-120	Pass		
Magnesium	%	94			80-120	Pass		
Potassium	%	93			80-120	Pass		
Sodium	%	95			80-120	Pass		
<b>LCS - % Recovery</b>								
<b>Volatile Organics</b>								
1.1-Dichloroethene	%	85			70-130	Pass		
1.1.1-Trichloroethane	%	99			70-130	Pass		
1.2-Dichlorobenzene	%	101			70-130	Pass		
1.2-Dichloroethane	%	96			70-130	Pass		
Trichloroethene	%	110			70-130	Pass		
<b>LCS - % Recovery</b>								
<b>Phenols (Halogenated)</b>								
2-Chlorophenol	%	105			25-140	Pass		
2.4-Dichlorophenol	%	95			25-140	Pass		
2.4.5-Trichlorophenol	%	86			25-140	Pass		
2.4.6-Trichlorophenol	%	110			25-140	Pass		
2.6-Dichlorophenol	%	123			25-140	Pass		
4-Chloro-3-methylphenol	%	94			25-140	Pass		
<b>LCS - % Recovery</b>								
<b>Phenols (non-Halogenated)</b>								
2-Nitrophenol	%	94			25-140	Pass		
2.4-Dimethylphenol	%	120			25-140	Pass		
2-Methylphenol (o-Cresol)	%	100			25-140	Pass		
3&4-Methylphenol (m&p-Cresol)	%	97			25-140	Pass		
Phenol	%	99			25-140	Pass		
<b>LCS - % Recovery</b>								
Total Organic Carbon	%	102			70-130	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>								
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>				Result 1				
TRH C10-C14	L25-Oc0089437	CP	%	91		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>BTEX</b>				Result 1				
Benzene	L25-Oc0089437	CP	%	98		70-130	Pass	
Toluene	L25-Oc0089437	CP	%	98		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Ethylbenzene	L25-Oc0089437	CP	%	97		70-130	Pass	
m&p-Xylenes	L25-Oc0089437	CP	%	98		70-130	Pass	
o-Xylene	L25-Oc0089437	CP	%	95		70-130	Pass	
Xylenes - Total*	L25-Oc0089437	CP	%	97		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Volatile Organics</b>				Result 1				
1.1-Dichloroethene	L25-Oc0089437	CP	%	85		70-130	Pass	
1.1.1-Trichloroethane	L25-Oc0089437	CP	%	99		70-130	Pass	
1.2-Dichlorobenzene	L25-Oc0089437	CP	%	101		70-130	Pass	
1.2-Dichloroethane	L25-Oc0089437	CP	%	96		70-130	Pass	
Trichloroethene	L25-Oc0089437	CP	%	110		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>				Result 1				
Naphthalene	L25-Oc0089437	CP	%	88		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Phenols (Halogenated)</b>				Result 1				
2-Chlorophenol	L25-Oc0089437	CP	%	97		30-130	Pass	
2.4-Dichlorophenol	L25-Oc0089437	CP	%	89		30-130	Pass	
2.4.5-Trichlorophenol	L25-Oc0089437	CP	%	104		30-130	Pass	
2.4.6-Trichlorophenol	L25-Oc0089437	CP	%	96		30-130	Pass	
2.6-Dichlorophenol	L25-Oc0089437	CP	%	113		30-130	Pass	
4-Chloro-3-methylphenol	L25-Oc0089437	CP	%	88		30-130	Pass	
Pentachlorophenol	L25-Oc0072559	NCP	%	100		30-130	Pass	
Tetrachlorophenols - Total	L25-Oc0072559	NCP	%	98		30-130	Pass	
<b>Spike - % Recovery</b>								
<b>Phenols (non-Halogenated)</b>				Result 1				
2-Nitrophenol	L25-Oc0089437	CP	%	82		30-130	Pass	
2.4-Dimethylphenol	L25-Oc0089437	CP	%	108		30-130	Pass	
2-Methylphenol (o-Cresol)	L25-Oc0089437	CP	%	92		30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	L25-Oc0089437	CP	%	107		30-130	Pass	
Dinoseb	L25-Oc0072559	NCP	%	95		30-130	Pass	
Phenol	L25-Oc0089437	CP	%	108		30-130	Pass	
<b>Spike - % Recovery</b>								
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>				Result 1				
TRH >C10-C16	L25-Oc0089437	CP	%	93		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Base Neutral Pesticides in Water</b>				Result 1				
Terbutryn	M25-Oc0074791	NCP	%	83		60-120	Pass	
Endosulfan I	L25-Oc0082130	NCP	%	99		60-120	Pass	
Fenamiphos	M25-Oc0074791	NCP	%	109		60-120	Pass	
Simazine	M25-Oc0074791	NCP	%	115		60-120	Pass	
Hexazinone	M25-Oc0074791	NCP	%	117		60-120	Pass	
Myclobutanil	M25-Oc0074791	NCP	%	87		60-120	Pass	
<b>Spike - % Recovery</b>								
<b>OCOP in Water</b>				Result 1				
Bromophos Ethyl	M25-Oc0074791	NCP	%	106		60-120	Pass	
Endrin	L25-Oc0067941	NCP	%	90		60-120	Pass	
Fenitrothion	L25-Oc0082130	NCP	%	99		60-120	Pass	
Lindane	L25-Oc0082130	NCP	%	109		60-120	Pass	
o,p-DDT	L25-Oc0067941	NCP	%	120		60-120	Pass	
p,p-DDD	L25-Oc0067941	NCP	%	105		60-120	Pass	
p,p-DDT	L25-Oc0067941	NCP	%	97		60-120	Pass	
<b>Spike - % Recovery</b>								
<b>Low Level PAH in Water</b>				Result 1				

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Naphthalene	L25-Oc0091037	NCP	%	93		60-120	Pass	
Fluorene	L25-Oc0067941	NCP	%	105		60-120	Pass	
Phenanthrene	L25-Oc0091037	NCP	%	110		60-120	Pass	
Benzo(ghi)perylene	L25-Oc0067941	NCP	%	100		60-120	Pass	
<b>Spike - % Recovery</b>								
				Result 1				
Chemical Oxygen Demand (COD)	M25-Oc0090924	NCP	%	109		70-130	Pass	
Total Nitrogen	L25-Oc0089591	NCP	%	101		70-130	Pass	
Total Phosphorus	L25-Oc0089591	NCP	%	97		80-120	Pass	
<b>Spike - % Recovery</b>								
<b>Metals M8 filtered</b>				Result 1				
Arsenic (filtered)	L25-Oc0089437	CP	%	103		75-125	Pass	
Cadmium (filtered)	L25-Oc0089437	CP	%	95		75-125	Pass	
Chromium (filtered)	L25-Oc0089437	CP	%	105		75-125	Pass	
Copper (filtered)	L25-Oc0089437	CP	%	98		75-125	Pass	
Lead (filtered)	L25-Oc0089437	CP	%	96		75-125	Pass	
Nickel (filtered)	L25-Oc0089437	CP	%	100		75-125	Pass	
Zinc (filtered)	L25-Oc0089437	CP	%	106		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Heavy Metals (filtered)</b>				Result 1				
Aluminium (filtered)	L25-Oc0089437	CP	%	106		75-125	Pass	
Manganese (filtered)	L25-Oc0089437	CP	%	98		75-125	Pass	
Selenium (filtered)	L25-Oc0089437	CP	%	95		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Eurofins Suite B11C: Na/K/Ca/Mg</b>				Result 1				
Calcium	L25-Oc0089437	CP	%	85		75-125	Pass	
Potassium	L25-Oc0089437	CP	%	87		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Base Neutral Pesticides in Water</b>				Result 1				
Diuron	L25-Oc0089438	CP	%	94		60-120	Pass	
Prometryn	L25-Oc0089438	CP	%	92		60-120	Pass	
Molinate	L25-Oc0089438	CP	%	103		60-120	Pass	
Fenitrothion	L25-Oc0089438	CP	%	105		60-120	Pass	
Fluometuron	L25-Oc0089438	CP	%	99		60-120	Pass	
Chlorpyrifos	L25-Oc0089438	CP	%	102		60-120	Pass	
Trifluralin	L25-Oc0089438	CP	%	94		60-120	Pass	
Dimethoate	L25-Oc0089438	CP	%	115		60-120	Pass	
Atrazine	L25-Oc0089438	CP	%	94		60-120	Pass	
Endosulfan II	L25-Oc0089438	CP	%	97		60-120	Pass	
Endosulfan Sulfate	L25-Oc0089438	CP	%	94		60-120	Pass	
Propazine	L25-Oc0089438	CP	%	98		60-120	Pass	
Diclofop Methyl	L25-Oc0089438	CP	%	101		60-120	Pass	
Tebuconazole	L25-Oc0089438	CP	%	88		60-120	Pass	
Metolachlor	L25-Oc0089438	CP	%	86		60-120	Pass	
Azinphos Methyl	L25-Oc0089438	CP	%	105		60-120	Pass	
Propiconazole	L25-Oc0089438	CP	%	98		60-120	Pass	
<b>Spike - % Recovery</b>								
<b>OCOP in Water</b>				Result 1				
Aldrin	L25-Oc0089438	CP	%	96		60-120	Pass	
alpha-BHC (HCH)	L25-Oc0089438	CP	%	98		60-120	Pass	
beta-BHC (HCH)	L25-Oc0089438	CP	%	111		60-120	Pass	
delta-BHC (HCH)	L25-Oc0089438	CP	%	89		60-120	Pass	
Bifenthrin	L25-Oc0089438	CP	%	97		60-120	Pass	
Chlordane	L25-Oc0089438	CP	%	103		60-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Chlorpyrifos	L25-Oc0089438	CP	%	102		60-120	Pass	
Dieldrin	L25-Oc0089438	CP	%	97		60-120	Pass	
Endosulfan I	L25-Oc0089438	CP	%	86		60-120	Pass	
Endosulfan II	L25-Oc0089438	CP	%	92		60-120	Pass	
Endosulfan Sulfate	L25-Oc0089438	CP	%	92		60-120	Pass	
Hexachlorobenzene (HCB)	L25-Oc0089438	CP	%	105		60-120	Pass	
Heptachlor Epoxide	L25-Oc0089438	CP	%	112		60-120	Pass	
Heptachlor	L25-Oc0089438	CP	%	118		60-120	Pass	
Malathion	L25-Oc0089438	CP	%	100		60-120	Pass	
Oxychlorodane	L25-Oc0089438	CP	%	93		60-120	Pass	
p,p-DDE	L25-Oc0089438	CP	%	86		60-120	Pass	
Trifluralin	L25-Oc0089438	CP	%	94		60-120	Pass	
Vinclozolin	L25-Oc0089438	CP	%	97		60-120	Pass	
<b>Spike - % Recovery</b>								
<b>Low Level PAH in Water</b>				Result 1				
2-Methylnaphthalene	L25-Oc0089438	CP	%	100		60-120	Pass	
Acenaphthylene	L25-Oc0089438	CP	%	100		60-120	Pass	
Acenaphthene	L25-Oc0089438	CP	%	85		60-120	Pass	
Anthracene	L25-Oc0089438	CP	%	80		60-120	Pass	
Fluoranthene	L25-Oc0089438	CP	%	90		60-120	Pass	
Pyrene	L25-Oc0089438	CP	%	84		60-120	Pass	
Benz(a)anthracene	L25-Oc0089438	CP	%	97		60-120	Pass	
Chrysene	L25-Oc0089438	CP	%	87		60-120	Pass	
Benzo(b)fluoranthene	L25-Oc0089438	CP	%	112		60-120	Pass	
Benzo(k)fluoranthene	L25-Oc0089438	CP	%	108		60-120	Pass	
Benzo(a)pyrene	L25-Oc0089438	CP	%	106		60-120	Pass	
Indeno(1.2.3-c.d)pyrene	L25-Oc0089438	CP	%	112		60-120	Pass	
Dibenz(a,h)anthracene	L25-Oc0089438	CP	%	98		60-120	Pass	
<b>Spike - % Recovery</b>								
				Result 1				
Ammonia (as N)	L25-Oc0089438	CP	%	110		80-120	Pass	
Chloride	L25-Oc0089438	CP	%	110		70-130	Pass	
Nitrate (as N)	L25-Oc0089438	CP	%	108		70-130	Pass	
Nitrite (as N)	L25-Oc0089438	CP	%	101		80-120	Pass	
NOx (as N)	L25-Oc0089438	CP	%	105		80-120	Pass	
Sulfate (as SO4)	L25-Oc0089438	CP	%	116		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Metals M8 filtered</b>				Result 1				
Arsenic (filtered)	L25-Oc0089438	CP	%	104		75-125	Pass	
Cadmium (filtered)	L25-Oc0089438	CP	%	97		75-125	Pass	
Chromium (filtered)	L25-Oc0089438	CP	%	109		75-125	Pass	
Copper (filtered)	L25-Oc0089438	CP	%	105		75-125	Pass	
Lead (filtered)	L25-Oc0089438	CP	%	101		75-125	Pass	
Mercury (filtered)	L25-Oc0089438	CP	%	76		75-125	Pass	
Nickel (filtered)	L25-Oc0089438	CP	%	104		75-125	Pass	
Zinc (filtered)	L25-Oc0089438	CP	%	111		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Heavy Metals (filtered)</b>				Result 1				
Aluminium (filtered)	L25-Oc0089438	CP	%	110		75-125	Pass	
Manganese (filtered)	L25-Oc0089438	CP	%	107		75-125	Pass	
Selenium (filtered)	L25-Oc0089438	CP	%	95		75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>									
<b>Phenols (Halogenated)</b>				Result 1	Result 2	RPD			
2-Chlorophenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2,4-Dichlorophenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2,4,5-Trichlorophenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2,4,6-Trichlorophenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2,6-Dichlorophenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Chloro-3-methylphenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Pentachlorophenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Tetrachlorophenols - Total	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
<b>Duplicate</b>									
<b>Phenols (non-Halogenated)</b>				Result 1	Result 2	RPD			
2-Cyclohexyl-4,6-dinitrophenol	L25-Oc0085704	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2-Methyl-4,6-dinitrophenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Nitrophenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2,4-Dimethylphenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2,4-Dinitrophenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Methylphenol (o-Cresol)	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Nitrophenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dinoseb	L25-Oc0085704	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Phenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
<b>Duplicate</b>									
<b>Base Neutral Pesticides in Water</b>				Result 1	Result 2	RPD			
Diuron	L25-Oc0089437	CP	ug/L	< 0.5	< 0.5	<1	30%	Pass	
Prometryn	L25-Oc0089437	CP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Molinate	L25-Oc0089437	CP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Terbutryn	L25-Oc0089437	CP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Fenitrothion	L25-Oc0089437	CP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Fluometuron	L25-Oc0089437	CP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Chlorpyrifos	L25-Oc0089437	CP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Trifluralin	L25-Oc0089437	CP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Dimethoate	L25-Oc0089437	CP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Endosulfan I	L25-Oc0089437	CP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Fenamiphos	L25-Oc0089437	CP	ug/L	< 1	< 1	<1	30%	Pass	
Simazine	L25-Oc0089437	CP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Atrazine	L25-Oc0089437	CP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Endosulfan II	L25-Oc0089437	CP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Endosulfan Sulfate	L25-Oc0089437	CP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Propazine	L25-Oc0089437	CP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Diclofop Methyl	L25-Oc0089437	CP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Amitraz	L25-Oc0089437	CP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Tebuconazole	L25-Oc0089437	CP	ug/L	< 0.4	< 0.4	<1	30%	Pass	
Metolachlor	L25-Oc0089437	CP	ug/L	< 0.2	< 0.2	<1	30%	Pass	
Hexazinone	L25-Oc0089437	CP	ug/L	< 0.4	< 0.4	<1	30%	Pass	
Myclobutanil	L25-Oc0089437	CP	ug/L	< 0.4	< 0.4	<1	30%	Pass	
Azinphos Methyl	L25-Oc0089437	CP	ug/L	< 1	< 1	<1	30%	Pass	
Propiconazole	L25-Oc0089437	CP	ug/L	< 0.4	< 0.4	<1	30%	Pass	
<b>Duplicate</b>									
<b>OCOP in Water</b>				Result 1	Result 2	RPD			
Aldrin	L25-Oc0089437	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
alpha-BHC (HCH)	L25-Oc0089437	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
beta-BHC (HCH)	L25-Oc0089437	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
delta-BHC (HCH)	L25-Oc0089437	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass	

Duplicate								
OCOP in Water				Result 1	Result 2	RPD		
Bifenthrin	L25-Oc0089437	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Bromophos Ethyl	L25-Oc0089437	CP	ug/L	< 0.005	< 0.005	<1	30%	Pass
Chlordane	L25-Oc0089437	CP	ug/L	< 0.002	< 0.002	<1	30%	Pass
Chlorothalonil	L25-Oc0089437	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Chlorpyrifos	L25-Oc0089437	CP	ug/L	< 0.005	< 0.005	<1	30%	Pass
Diazinon	L25-Oc0089437	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Dieldrin	L25-Oc0089437	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Endosulfan I	L25-Oc0089437	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Endosulfan II	L25-Oc0089437	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Endosulfan Sulfate	L25-Oc0089437	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Endrin	L25-Oc0089437	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Ethion	L25-Oc0089437	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Fenitrothion	L25-Oc0089437	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Fipronil	L25-Oc0089437	CP	ug/L	< 0.02	< 0.02	<1	30%	Pass
Hexachlorobenzene (HCB)	L25-Oc0089437	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Heptachlor Epoxide	L25-Oc0089437	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Heptachlor	L25-Oc0089437	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Lindane	L25-Oc0089437	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Malathion	L25-Oc0089437	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Methoxychlor	L25-Oc0089437	CP	ug/L	< 0.02	< 0.02	<1	30%	Pass
o,p-DDT	L25-Oc0089437	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Oxychlordane	L25-Oc0089437	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass
p,p-DDD	L25-Oc0089437	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass
p,p-DDE	L25-Oc0089437	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass
p,p-DDT	L25-Oc0089437	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Parathion Ethyl	L25-Oc0089437	CP	ug/L	< 0.02	< 0.02	<1	30%	Pass
Parathion Methyl	L25-Oc0089437	CP	ug/L	< 0.02	< 0.02	<1	30%	Pass
Trifluralin	L25-Oc0089437	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Vinclozolin	L25-Oc0089437	CP	ug/L	< 0.02	< 0.02	<1	30%	Pass
Duplicate								
Low Level PAH in Water				Result 1	Result 2	RPD		
Naphthalene	L25-Oc0089437	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
2-Methylnaphthalene	L25-Oc0089437	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Acenaphthylene	L25-Oc0089437	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Acenaphthene	L25-Oc0089437	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Fluorene	L25-Oc0089437	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Phenanthrene	L25-Oc0089437	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Anthracene	L25-Oc0089437	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Fluoranthene	L25-Oc0089437	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Pyrene	L25-Oc0089437	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Benz(a)anthracene	L25-Oc0089437	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Chrysene	L25-Oc0089437	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Benzo(b)fluoranthene	L25-Oc0089437	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Benzo(k)fluoranthene	L25-Oc0089437	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Benzo(a)pyrene	L25-Oc0089437	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Indeno(1.2.3-c.d)pyrene	L25-Oc0089437	CP	ug/L	< 0.02	< 0.02	<1	30%	Pass
Dibenz(a,h)anthracene	L25-Oc0089437	CP	ug/L	< 0.02	< 0.02	<1	30%	Pass
Benzo(ghi)perylene	L25-Oc0089437	CP	ug/L	< 0.02	< 0.02	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Ammonia (as N)	L25-Oc0089437	CP	mg/L	0.22	0.22	<1	20%	Pass
Chloride	L25-Oc0089437	CP	mg/L	420	410	3.0	30%	Pass
Conductivity (at 25 °C)	L25-Oc0089592	NCP	uS/cm	1900	1900	1.0	30%	Pass
Nitrate (as N)	L25-Oc0089437	CP	mg/L	0.15	0.15	1.0	30%	Pass

<b>Duplicate</b>								
				Result 1	Result 2	RPD		
Nitrite (as N)	L25-Oc0089437	CP	mg/L	< 0.01	< 0.01	<1	20%	Pass
NOx (as N)	L25-Oc0089437	CP	mg/L	0.15	0.15	1.0	20%	Pass
Sulfate (as SO4)	L25-Oc0089437	CP	mg/L	150	150	<1	30%	Pass
Total Dissolved Solids Dried at 180 °C ± 2 °C	L25-Oc0089591	NCP	mg/L	1600	1500	6.0	30%	Pass
Total Nitrogen	L25-Oc0088590	NCP	mg/L	0.8	0.9	10	30%	Pass
Total Organic Carbon	M25-Oc0098398	NCP	mg/L	34	31	7.0	30%	Pass
Total Phosphorus	L25-Oc0088590	NCP	mg/L	0.03	0.03	14	20%	Pass
<b>Duplicate</b>								
<b>Metals M8 filtered</b>				Result 1	Result 2	RPD		
Arsenic (filtered)	L25-Oc0085734	NCP	mg/L	0.011	0.011	1.0	30%	Pass
Cadmium (filtered)	L25-Oc0085734	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Chromium (filtered)	L25-Oc0085734	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Copper (filtered)	L25-Oc0085734	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Lead (filtered)	L25-Oc0085734	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Mercury (filtered)	L25-Oc0085734	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Nickel (filtered)	L25-Oc0085734	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
<b>Duplicate</b>								
<b>Heavy Metals (filtered)</b>				Result 1	Result 2	RPD		
Aluminium (filtered)	L25-Oc0085734	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass
Manganese (filtered)	L25-Oc0085734	NCP	mg/L	< 0.005	0.005	4.0	30%	Pass
Selenium (filtered)	L25-Oc0085734	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
<b>Duplicate</b>								
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>				Result 1	Result 2	RPD		
TRH C6-C9	L25-Oc0089438	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH C10-C14	L25-Oc0089438	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH C15-C28	L25-Oc0089438	CP	mg/L	< 0.04	< 0.04	<1	30%	Pass
TRH C29-C36	L25-Oc0089438	CP	mg/L	< 0.04	< 0.04	<1	30%	Pass
<b>Duplicate</b>								
<b>BTEX</b>				Result 1	Result 2	RPD		
Benzene	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Toluene	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Ethylbenzene	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
m&p-Xylenes	L25-Oc0089438	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass
o-Xylene	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Xylenes - Total*	L25-Oc0089438	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass
<b>Duplicate</b>								
<b>Volatile Organics</b>				Result 1	Result 2	RPD		
1.1-Dichloroethane	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1-Dichloroethene	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.1-Trichloroethane	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.1.2-Tetrachloroethane	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.2-Trichloroethane	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.2.2-Tetrachloroethane	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dibromoethane	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichlorobenzene	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichloroethane	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichloropropane	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2.3-Trichloropropane	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2.4-Trimethylbenzene	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3-Dichlorobenzene	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3-Dichloropropane	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3.5-Trimethylbenzene	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.4-Dichlorobenzene	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass

<b>Duplicate</b>								
<b>Volatile Organics</b>				Result 1	Result 2	RPD		
2-Butanone (MEK)	L25-Oc0089438	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
2-Propanone (Acetone)	L25-Oc0089438	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
4-Chlorotoluene	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	L25-Oc0089438	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Allyl chloride	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromobenzene	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromochloromethane	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromodichloromethane	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromoform	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromomethane	L25-Oc0089438	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Carbon disulfide	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Carbon Tetrachloride	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chlorobenzene	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chloroethane	L25-Oc0089438	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Chloroform	L25-Oc0089438	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Chloromethane	L25-Oc0089438	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
cis-1,2-Dichloroethene	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
cis-1,3-Dichloropropene	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibromochloromethane	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibromomethane	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dichlorodifluoromethane	L25-Oc0089438	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Iodomethane	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Isopropyl benzene (Cumene)	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Methylene Chloride	L25-Oc0089438	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Styrene	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Tetrachloroethene	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
trans-1,2-Dichloroethene	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
trans-1,3-Dichloropropene	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Trichloroethene	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Trichlorofluoromethane	L25-Oc0089438	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Vinyl chloride	L25-Oc0089438	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
<b>Duplicate</b>								
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>				Result 1	Result 2	RPD		
Naphthalene	L25-Oc0089438	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
TRH C6-C10	L25-Oc0089438	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass
<b>Duplicate</b>								
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>				Result 1	Result 2	RPD		
TRH >C10-C16	L25-Oc0089438	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH >C16-C34	L25-Oc0089438	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass
TRH >C34-C40	L25-Oc0089438	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass
<b>Duplicate</b>								
<b>Heavy Metals</b>				Result 1	Result 2	RPD		
Iron	L25-Oc0089438	CP	mg/L	1.2	1.3	6.0	30%	Pass
<b>Duplicate</b>								
<b>Eurofins Suite B11C: Na/K/Ca/Mg</b>				Result 1	Result 2	RPD		
Calcium	L25-Oc0089438	CP	mg/L	0.7	0.7	7.0	30%	Pass
Magnesium	L25-Oc0089438	CP	mg/L	3.9	4.2	6.0	30%	Pass
Potassium	L25-Oc0089438	CP	mg/L	1.5	1.5	4.0	30%	Pass
Sodium	L25-Oc0089438	CP	mg/L	52	55	6.0	30%	Pass
<b>Duplicate</b>								
				Result 1	Result 2	RPD		
Chemical Oxygen Demand (COD)	L25-Oc0089439	CP	mg/L	< 25	< 25	<1	30%	Pass

## Comments

Demeton-S-methyl analysis by: MPL, NATA accreditation no. 2901, report reference PGJ2003

## Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

## Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.

## Authorised by:

Natalie Hill	Analytical Services Manager
Caitlin Breeze	Senior Analyst-Inorganic
Douglas Todd	Senior Analyst-Organic
Douglas Todd	Senior Analyst-Volatile
Mary Makarios	Senior Analyst-Inorganic
Patrick Patfield	Senior Analyst-Organic
Patrick Patfield	Senior Analyst-Volatile
Sam Becker	Senior Analyst-Inorganic
Sean Sangster	Senior Analyst-Metal



**Kim Rodgers**  
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

\* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request

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# Chain of custody



PROJECT NO (Esdat Ref.): <b>70111</b>	LAB:	LABORATORY BATCH NO.:
PROJECT NAME: <b>Fern View GME</b>	SAMPLERS: <b>BChaine</b>	
DATE NEEDED BY: <b>5 days TAT @</b>	QC LEVEL: NEPM (2013)	
PHONE: Sydney 02 8245 0300   Perth 08 9380 3100   Brisbane 07 3211 5350   Melbourne 03 9642 0599   Adelaide 08 8431 7113   Hobart 03 6208 3700		
SEND REPORT TO: (1) jbsglabresults@jbsg.com.au; (2) .....@jbsg.com.au; (3) .....@jbsg.com.au		
PROJECT MANAGER NAME TO APPEAR ON INVOICES: .....		SEND INVOICES TO: invoices@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:						TYPE OF ASBESTOS ANALYSIS	IDENTIFICATION	NEPM/WA	NOTES:
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH				
As per quote WA-25-0918-JBS 6-monthly G water All nitrates filtered + frozen (disregard labelling)									#1285927
GG01	W	28.10.25		Bottle Pack					
GG05	↓	↓		↓					
GG06	↓	↓		↓					
QC01	↓	↓		↓					
QC03	↓	↓		↓					

RELINQUISHED BY:		METHOD OF SHIPMENT:		RECEIVED BY:		FOR RECEIVING LAB USE ONLY:	
NAME: <b>Ben Chaine</b>	DATE: <b>29.10.25</b>	CONSIGNMENT NOTE NO.		NAME:	DATE:	COOLER SEAL - Yes..... No ..... Intact ..... Broken .....	
OF: JBS&G	<i>B Chaine</i>	TRANSPORT CO.		DATE:	OF:	COOLER TEMP ..... deg C	
NAME:	DATE:	CONSIGNMENT NOTE NO.		NAME:	DATE:	COOLER SEAL - Yes..... No ..... Intact ..... Broken .....	
OF:		TRANSPORT CO.		OF:		COOLER TEMP ..... deg C	

Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsvd.; C = Sodium Hydroxide Prsvd; VC = Hydrochloric Acid Prsvd Vial; VS = Sulfuric Acid Prsvd Vial; S = Sulfuric Acid Prsvd; Z = Zinc Prsvd; E = EDTA Prsvd; ST = Sterile Bottle; O = Other

Date/Time: **29/10 15:10**  
 Courier / Drop Off  
 Attempt to Chill: **Y/N/NA**  
 Temperature: **10.6°C**  
 Signature: *[Signature]*

## WA-25-0918-JBS Landfill Compliance

James Young  
WA State Lead (CLM) - Associate  
JBS&G

18th September 2025

Analyte	Reporting Limit mg/L	Price/Sample exc. GST	Sample Bottle Requirement
<b>Leachate</b>			
<b>Quarterly</b>			
pH	0.1 pH unit	\$3.10	1 x 500mL Plastic
EC	1 uS/cm	\$3.10	
Total Suspended Solids (TSS)	5	\$7.50	
Sulphate	1	\$7.50	
Chloride	5	\$7.50	
<b>Total Cations: K</b>	0.5	\$7.15	
<b>B19D Nutrients #5 TN*, TKN, NOX, NO2, NO3, NH3(as N), TP(as P)</b>	0.2, 0.2, 0.01, 0.01, 0.01, 0.02, 0.01	\$33.90	
Chemical Oxygen Demand (COD)	25	\$18.50	1 x 40mL Vial
TOC	5	\$20.50	
<b>Dissolved Metals - Cd, Cr, Cu, Ni, Pb, Zn, Hg, Mn, Mo, Se</b>	Various	\$14.90	1 x 60mL Metals (Field Filtered)
<b>Total Metals - As, Fe</b>		\$11.05	1 x 60mL Metals
<b>B1 TRH, BTEXN</b>	0.02-0.05, 0.001-0.003	\$71.20	1 x 200mL Amber Glass and 2 x 40mL Vials
<b>Polycyclic Aromatic Hydrocarbons (PAH) - LL - inc Acenaphthene, Anthracene, Benz(a)pyrene, Fluoranthene, Naphthalene, Pyrene</b>	0.01 ug/L		
<b>B15 : OCP, OPP, PCB inc Aldrin/Dieldrin, Chlordane, Chlorpyrifos, Diazinon, DDT, HCB, Heptachlor, Lindane, Malathion (Maldison), Parathion</b>	0.001-0.05 ug/L and 0.02 ug/L		
<b>Base Neutral Pesticides inc Atrazine</b>	As per individual analyte	\$90.00	
<b>Volatile Organic Compounds (VOC) inc TCE and PCE</b>	Various	\$45.50	2 x 40mL Vials
<b>Unit Price per Sample (Exc GST)</b>		<b>\$385.20</b>	
<b>Sample Numbers</b>		<b>4</b>	
<b>Total Price (Exc GST)</b>		<b>\$1,540.80</b>	

Analyte	Reporting Limit mg/L	Price/Sample exc. GST	Sample Bottle Requirement
<b>Groundwater</b>			
<b>Quarterly</b>			
<b>B19D</b> Nutrients #5 TN*, TKN, NOX, NO2, NO3, NH3(as N), TP(as P)	0.2, 0.2, 0.01, 0.01, 0.01, 0.02, 0.01	\$33.90	1 x 500mL Plastic
Chemical Oxygen Demand (COD)	25	\$18.50	
Total Dissolved Solids (TDS)	5	\$7.50	
<b>B11C</b> Cations #1 Alkali Metals (Na, K, Ca, Mg)	0.5	\$10.30	
<b>B11E</b> Anions #1 Cl, SO4, Alkalinity	5, 1, 5	\$15.20	1 x 40mL Vial
TOC	5	\$20.50	
<b>M8FILT</b> - As, Cd, Cr, Cu, Ni, Pb, Zn, Hg	Various	\$14.90	1 x 60mL Metals (Field Filtered)
Additional Dissolved Metals - Al, Mn, Se		\$9.80	1 x 60mL Metals
Total Metals - Fe			
<b>Unit Price per Sample (Exc GST)</b>		<b>\$130.60</b>	
<b>Sample Numbers</b>		<b>8</b>	
<b>Total Price (Exc GST)</b>		<b>\$1,044.80</b>	

Analyte	Reporting Limit mg/L	Price/Sample exc. GST	Sample Bottle Requirement
<b>Groundwater</b>			
<b>6-monthly</b>			
<b>B19D</b> Nutrients #5 TN*, TKN, NOX, NO2, NO3, NH3(as N), TP(as P)	0.2, 0.2, 0.01, 0.01, 0.01, 0.02, 0.01	\$33.90	1 x 500mL Plastic
Chemical Oxygen Demand (COD)	25	\$18.50	
Total Dissolved Solids (TDS)	5	\$7.50	
<b>B11C</b> Cations #1 Alkali Metals (Na, K, Ca, Mg)	0.5	\$10.30	
<b>B11E</b> Anions #1 Cl, SO4, Alkalinity	5, 1, 5	\$15.20	1 x 40mL Vial
TOC	5	\$20.50	
<b>M8FILT</b> - As, Cd, Cr, Cu, Ni, Pb, Zn, Hg	Various	\$14.90	1 x 60mL Metals (Field Filtered)
Additional Dissolved Metals - Al, Mn, Se		\$9.80	1 x 60mL Metals
Total Metals - Fe			
<b>B1</b> TRH, BTEXN	0.02-0.05, 0.001-0.003	\$71.20	1 x 200mL Amber Glass and 2 x 40mL Vials
<b>Polycyclic Aromatic Hydrocarbons (PAH) - LL</b> - inc Acenaphthene, Anthracene, Benz(a)pyrene, Fluoranthene, Naphthalene, Pyrene	0.01 ug/L		
Phenols – Speciated	0.003-0.1		
<b>B15 : OCP, OPP, PCB</b> inc Aldrin/Dieldrin, Chlordane, Chlorpyrifos, Diazinon, DDT, HCB, Heptachlor, Lindane, Malathion (Maldison), Parathion	0.001-0.05 ug/L and 0.02 ug/L	\$43.80	1 x 1L Amber Glass
<b>Base Neutral Pesticides</b> - inc Atrazine Dimethoate, Fenamiphos, Fenthion	0.1-0.5 ug/L	\$90.00	
<b>Volatile Organic Compounds (VOC)</b> inc TCE and PCE	Various	\$45.50	2 x 40mL Vials
<b>Demeton S Methyl</b>	5 ug/L - Subcontract to MPL	\$175.00	1 x 500mL Amber Glass
<b>Unit Price per Sample (Exc GST)</b>		<b>\$582.70</b>	
<b>Sample Numbers</b>		<b>8</b>	
<b>Total Price (Exc GST)</b>		<b>\$4,661.60</b>	

***Please Note - A \$40 + GST Handling fee will apply per job***

This quotation is valid until 30/06/2026

Please quote the above quotation number on COC with samples.



Natalie Hill | Analytical Services Manager | Eurofins|ARL

Phone. +61 8 6253 4444

Email. [nataliehill@eurofins.com](mailto:nataliehill@eurofins.com)

**STANDARD TERMS AND CONDITIONS OF SALE (AUSTRALIA)**

[Please click here to download a copy of the Standard Terms and Conditions.](#)

**Eurofins ARL Pty Ltd**

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**Newcastle**  
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 NSW 2304  
 +61 2 4968 8448  
 NATA# 1261  
 Site# 25079

## Sample Receipt Advice

**Company name:** JBS & G Australia (WA) P/L  
**Contact name:** Ben Chaine  
**Project name:** JULY 2025 SUPPORT  
**Project ID:** 70121  
**Turnaround time:** 5 Day  
**Date/Time received:** Oct 31, 2025 4:20 PM  
**Eurofins reference:** 1287068

## Sample Information

- ✓ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ✓ Sample Temperature of chilled sample on the batch as recorded by Eurofins Sample Receipt : 10 degrees Celsius.
- ✓ All samples have been received as described on the above COC.
- ✓ COC has been completed correctly.
- ✓ Attempt to chill was evident.
- ✓ Appropriately preserved sample containers have been used.
- ✓ All samples were received in good condition.
- ✓ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ✓ Appropriate sample containers have been used.
- ✓ Sample containers for volatile analysis received with zero headspace.
- ✗ Split sample sent to requested external lab.
- ✗ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

## Notes

**COD and TOC sent to Melb. Demeton S Methyl sent to MPL.**

## Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

**Natalie Hill on phone : or by email: [Natalie.Hill@eurofinsanz.com](mailto:Natalie.Hill@eurofinsanz.com)**

Results will be delivered electronically via email to Ben Chaine - [bchaine@jbsg.com.au](mailto:bchaine@jbsg.com.au).

*Note: A copy of these results will also be delivered to the general JBS & G Australia (WA) P/L email address.*



Envirolab Services (WA) Pty Ltd trading as MPL Laboratories

ABN 53 140 099 207

7-11 Catalano Road Canning Vale WA 6155

ph +61 8 9317 2505

lab@mpl.com.au

www.mpl.com.au

## Certificate of Analysis PGK0093

### Client Details

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**Client** Eurofins ARL Pty Ltd  
**Contact** Reports  
**Address** 46-48 Banksia Rd, Welshpool, WA, 6106

### Sample Details

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**Your Reference** 1287068  
**Number of Samples** 2 Water  
**Date Samples Received** 03/11/2025  
**Date Instructions Received** 03/11/2025

### Analysis Details

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Please refer to the following pages for results, methodology summary and quality control data.  
Samples were analysed as received from the client. Results relate specifically to the samples as received.  
Results are reported on a dry weight basis for soils and on an as received basis for other matrices.

### Report Details

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**Date Final Results Expected** 11/11/2025  
**Date of Issue** 07/11/2025

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**Accredited for compliance with ISO/IEC 17025. Tests not covered by NATA are denoted with \*.**

### Authorisation Details

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**Results Approved By** Hien Luong, Chemist - FAS

**Laboratory Manager** Michael Kubiak

# Certificate of Analysis PGK0093

## Samples in this Report

Envirolab ID	Sample ID	Matrix	Date Sampled	Date Received
PGK0093-01	25-Oc0098163	Water	31/10/2025	03/11/2025
PGK0093-02	25-Oc0098164	Water	31/10/2025	03/11/2025

# Certificate of Analysis PGK0093

## SVOC - Organophosphorus Pesticides (Water)

Envirolab ID	Units	PQL	PGK0093-01	PGK0093-02
Your Reference			25-Oc0098163	25-Oc0098164
Date Sampled			31/10/2025	31/10/2025
Demeton-S-methyl	µg/L	0.020	<0.020	<0.020

# Certificate of Analysis PGK0093

## Method Summary

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Method ID	Methodology Summary
ORG-022	Determination of semi-volatile organic compounds (SVOCs) by GC-MS. Water samples are extracted by LLE and soils using DCM/Acetone/Methanol.

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# Certificate of Analysis PGK0093

## Result Definitions

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Identifier	Description
NR	Not reported
NEPM	National Environment Protection Measure
NS	Not specified
LCS	Laboratory Control Sample
RPD	Relative Percent Difference
>	Greater than
<	Less than
PQL	Practical Quantitation Limit
INS	Insufficient sample for this test
NA	Test not required
NT	Not tested
DOL	Samples rejected due to particulate overload (air filters only)
RFD	Samples rejected due to filter damage (air filters only)
RUD	Samples rejected due to uneven deposition (air filters only)
##	Indicates a laboratory acceptance criteria outlier, for further details, see Result Comments and/or QC Comments

## Quality Control Definitions

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### Blank

This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, and is determined by processing solvents and reagents in exactly the same manner as for samples.

### Surrogate Spike

Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

### LCS (Laboratory Control Sample)

This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

### Matrix Spike

A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

### Duplicate

This is the complete duplicate analysis of a sample from the process batch. The sample selected should be one where the analyte concentration is easily measurable.

# Certificate of Analysis PGK0093

## Laboratory Acceptance Criteria

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Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria. Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction. Spikes for Physical and Aggregate Tests are not applicable. For VOCs in water samples, three vials are required for duplicate or spike analysis.

General Acceptance Criteria (GAC) - Analyte specific criteria applies for some analytes and is reflected in QC recovery tables.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% - see ELN-P05 QAQC tables for details (available on request); <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase. Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was typically insufficient in order to satisfy laboratory QA/QC protocols.

## Miscellaneous Information

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When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached. We have taken the sampling date as being the date received at the laboratory.

Two significant figures are reported for the majority of tests and with a high degree of confidence, for results <10\*PQL, the second significant figure may be in doubt i.e. has a relatively high degree of uncertainty and is provided for information only.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS where sediment/solids are included by default.

Urine Analysis - The BEI values listed are taken from the 2022 edition of *TLVs and BEIs Threshold Limits by ACGIH*.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volume(s) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

# Data Quality Assessment Summary PGK0093

## Client Details

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**Client** Eurofins ARL Pty Ltd  
**Your Reference** 1287068  
**Date Issued** 07/11/2025

## Recommended Holding Time Compliance

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No recommended holding time exceedances

## Quality Control and QC Frequency

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QC Type	Compliant	Details
Blank	Yes	No Outliers
LCS	Yes	No Outliers
Duplicates	Yes	No Outliers
Matrix Spike	Yes	No Outliers
Surrogates / Extracted Internal Standards	Yes	No Outliers
QC Frequency	Yes	No Outliers

Surrogates/Extracted Internal Standards, Duplicates and/or Matrix Spikes are not always relevant/applicable to certain analyses and matrices. Therefore, said QC measures are deemed compliant in these situations by default. See Laboratory Acceptance Criteria for more information

# Data Quality Assessment Summary PGK0093

## Recommended Holding Time Compliance

Analysis	Sample Number(s)	Date Sampled	Date Extracted	Date Analysed	Compliant
SVOC - OPP Ext   Water	1-2	31/10/2025	04/11/2025	05/11/2025	Yes

# Quality Control PGK0093

## ORG-022 | SVOC - Organophosphorus Pesticides (Water) | Batch BGK0417

Analyte	Units	PQL	Blank	DUP1	DUP2	LCS %	Spike % PGK0093-02
				BGK0417-DUP1# Samp   QC   RPD %	BGK0417-DUP2# Samp   QC   RPD %		
Dichlorvos	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Mevinphos	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Demeton-S-methyl	µg/L	0.020	<0.020	<40.0   <0.40   [NA] [1]	<2.00   <0.020   [NA]	[NA]	[NA]
Ethoprophos	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Monocrotophos	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Phorate	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Dimethoate	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Diazinon	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Disulfoton	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Chlorpyrifos-methyl	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	79.1	87.4
Parathion-methyl	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Ronnel	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Pirimiphos-methyl	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Fenitrothion	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	86.3	94.0
Malathion	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Chlorpyrifos	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	84.2	93.0
Fenthion	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Parathion	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Pirimiphos-ethyl	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
trans-Chlorfenvinphos	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
cis-Chlorfenvinphos	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Bromophos-ethyl	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Methidathion	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Tetrachlorvinphos	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Fenamiphos	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Prothiophos	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Fensulfothion	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Ethion	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	84.1	91.8
Sulprofos	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Carbophenothion	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Phosmet	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
EPN	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Phosalone	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Azinphos-methyl	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]
Coumaphos	µg/L	2		<40   <40   [NA] [1]	<2.0   <2.0   [NA]	[NA]	[NA]

# The QC reported was not specifically part of this workorder but formed part of the QC process batch.

### QC Comments

Identifier	Description
[1]	PQL has been raised due to matrix requiring dilution

JBS & G Australia (WA) P/  
 Level 9 Allendale Square, 77 St George's Terrace  
 Perth  
 WA 6000



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 Arrangement for the mutual recognition of the  
 equivalence of testing, medical testing, calibration,  
 inspection, proficiency testing scheme providers and  
 reference materials producers reports and certificates.

Attention: Ben Chaine

Report 1287068-W  
 Project name JULY 2025 SUPPORT  
 Project ID 70121  
 Received Date Oct 31, 2025

Client Sample ID			GG2	GG4A
Sample Matrix			Water	Water
Eurofins Sample No.			L25- Oc0098163	L25- Oc0098164
Date Sampled			Oct 31, 2025	Oct 31, 2025
Test/Reference	LOR	Unit		
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>				
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02
TRH C10-C14	0.02	mg/L	< 0.02	< 0.02
TRH C15-C28	0.04	mg/L	< 0.04	< 0.04
TRH C29-C36	0.04	mg/L	< 0.04	< 0.04
TRH C10-C36 (Total)	0.04	mg/L	< 0.04	< 0.04
<b>BTEX</b>				
Benzene	0.001	mg/L	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	82	80
<b>Volatile Organics</b>				
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001
2-Butanone (MEK)	0.005	mg/L	< 0.005	< 0.005
2-Propanone (Acetone)	0.005	mg/L	< 0.005	< 0.005
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	0.005	mg/L	< 0.005	< 0.005
Allyl chloride	0.001	mg/L	< 0.001	< 0.001

Client Sample ID			<b>GG2</b>	<b>GG4A</b>
Sample Matrix			<b>Water</b>	<b>Water</b>
Eurofins Sample No.			<b>L25- Oc0098163</b>	<b>L25- Oc0098164</b>
Date Sampled			<b>Oct 31, 2025</b>	<b>Oct 31, 2025</b>
Test/Reference	LOR	Unit		
<b>Volatile Organics</b>				
Benzene	0.001	mg/L	< 0.001	< 0.001
Bromobenzene	0.001	mg/L	< 0.001	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001
Bromoform	0.001	mg/L	< 0.001	< 0.001
Bromomethane	0.005	mg/L	< 0.005	< 0.005
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001
Chloroethane	0.005	mg/L	< 0.005	< 0.005
Chloroform	0.005	mg/L	< 0.005	< 0.005
Chloromethane	0.005	mg/L	< 0.005	< 0.005
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	< 0.001
Dichlorodifluoromethane	0.005	mg/L	< 0.005	< 0.005
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.001	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002
Methylene Chloride	0.005	mg/L	< 0.005	< 0.005
o-Xylene	0.001	mg/L	< 0.001	< 0.001
Styrene	0.001	mg/L	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	< 0.001
Trichlorofluoromethane	0.005	mg/L	< 0.005	< 0.005
Vinyl chloride	0.005	mg/L	< 0.005	< 0.005
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003
Total MAH*	0.003	mg/L	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	82	80
Toluene-d8 (surr.)	1	%	115	111
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>				
Naphthalene <sup>N02</sup>	0.001	mg/L	< 0.001	< 0.001
TRH >C10-C16 less Naphthalene (F2) <sup>*N01</sup>	0.02	mg/L	< 0.02	< 0.02
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	0.02	mg/L	< 0.02	< 0.02
<b>Phenols (Halogenated)</b>				
2-Chlorophenol	0.001	mg/L	< 0.001	< 0.001
2.4-Dichlorophenol	0.001	mg/L	< 0.001	< 0.001
2.4.5-Trichlorophenol	0.001	mg/L	< 0.001	< 0.001
2.4.6-Trichlorophenol	0.001	mg/L	< 0.001	< 0.001
2.6-Dichlorophenol	0.001	mg/L	< 0.001	< 0.001
4-Chloro-3-methylphenol	0.001	mg/L	< 0.001	< 0.001
Pentachlorophenol	0.001	mg/L	< 0.001	< 0.001
Tetrachlorophenols - Total	0.001	mg/L	< 0.001	< 0.001
Total Halogenated Phenol*	0.01	mg/L	< 0.001	< 0.001

Client Sample ID			<b>GG2</b>	<b>GG4A</b>
Sample Matrix			<b>Water</b>	<b>Water</b>
Eurofins Sample No.			<b>L25- Oc0098163</b>	<b>L25- Oc0098164</b>
Date Sampled			<b>Oct 31, 2025</b>	<b>Oct 31, 2025</b>
Test/Reference	LOR	Unit		
<b>Phenols (non-Halogenated)</b>				
2-Cyclohexyl-4.6-dinitrophenol	0.003	mg/L	< 0.003	< 0.003
2-Methyl-4.6-dinitrophenol	0.001	mg/L	< 0.001	< 0.001
2-Nitrophenol	0.001	mg/L	< 0.001	< 0.001
2.4-Dimethylphenol	0.001	mg/L	< 0.001	< 0.001
2.4-Dinitrophenol	0.001	mg/L	< 0.001	< 0.001
2-Methylphenol (o-Cresol)	0.001	mg/L	< 0.001	< 0.001
3&4-Methylphenol (m&p-Cresol)	0.001	mg/L	< 0.001	< 0.001
Total cresols*	0.01	mg/L	< 0.01	< 0.01
4-Nitrophenol	0.001	mg/L	< 0.001	< 0.001
Dinoseb	0.002	mg/L	< 0.002	< 0.002
Phenol	0.001	mg/L	< 0.001	< 0.001
Phenol-d6 (surr.)	1	%	50	67
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>				
TRH >C10-C16	0.02	mg/L	< 0.02	< 0.02
TRH >C16-C34	0.05	mg/L	< 0.05	< 0.05
TRH >C34-C40	0.05	mg/L	< 0.05	< 0.05
TRH >C10-C40 (total)*	0.05	mg/L	< 0.05	< 0.05
<b>Base Neutral Pesticides in Water</b>				
Diuron	0.5	ug/L	< 0.5	< 0.5
Prometryn	0.1	ug/L	< 0.1	< 0.1
Molinate	0.1	ug/L	< 0.1	< 0.1
Terbutryn	0.1	ug/L	< 0.1	< 0.1
Fenitrothion	0.1	ug/L	< 0.1	< 0.1
Fluometuron	0.1	ug/L	< 0.1	< 0.1
Chlorpyrifos	0.1	ug/L	< 0.1	< 0.1
Trifluralin	0.1	ug/L	< 0.1	< 0.1
Dimethoate	0.1	ug/L	< 0.1	< 0.1
Endosulfan I	0.1	ug/L	< 0.1	< 0.1
Fenamiphos	1	ug/L	< 1	< 1
Simazine	0.1	ug/L	< 0.1	< 0.1
Atrazine	0.1	ug/L	< 0.1	< 0.1
Endosulfan II	0.1	ug/L	< 0.1	< 0.1
Endosulfan Sulfate	0.1	ug/L	< 0.1	< 0.1
Propazine	0.1	ug/L	< 0.1	< 0.1
Diclofop Methyl	0.1	ug/L	< 0.1	< 0.1
Amitraz	0.1	ug/L	< 0.1	< 0.1
Tebuconazole	0.4	ug/L	< 0.4	< 0.4
Metolachlor	0.2	ug/L	< 0.2	< 0.2
Hexazinone	0.4	ug/L	< 0.4	< 0.4
Myclobutanil	0.4	ug/L	< 0.4	< 0.4
Azinphos Methyl	1	ug/L	< 1	< 1
Propiconazole	0.4	ug/L	< 0.4	< 0.4
<b>OCOP in Water</b>				
Aldrin	0.001	ug/L	< 0.001	< 0.001
alpha-BHC (HCH)	0.001	ug/L	< 0.001	< 0.001
beta-BHC (HCH)	0.001	ug/L	< 0.001	< 0.001
delta-BHC (HCH)	0.001	ug/L	< 0.001	< 0.001
Bifenthrin	0.05	ug/L	< 0.05	< 0.05

Client Sample ID			<b>GG2</b>	<b>GG4A</b>
Sample Matrix			<b>Water</b>	<b>Water</b>
Eurofins Sample No.			<b>L25- Oc0098163</b>	<b>L25- Oc0098164</b>
Date Sampled			<b>Oct 31, 2025</b>	<b>Oct 31, 2025</b>
Test/Reference	LOR	Unit		
<b>OCOP in Water</b>				
Bromophos Ethyl	0.005	ug/L	< 0.005	< 0.005
Chlordane	0.002	ug/L	< 0.002	< 0.002
Chlorothalonil	0.01	ug/L	< 0.01	< 0.01
Chlorpyrifos	0.005	ug/L	< 0.005	< 0.005
Diazinon	0.01	ug/L	< 0.01	< 0.01
Dieldrin	0.001	ug/L	< 0.001	< 0.001
Endosulfan I	0.001	ug/L	< 0.001	< 0.001
Endosulfan II	0.001	ug/L	< 0.001	< 0.001
Endosulfan Sulfate	0.001	ug/L	< 0.001	< 0.001
Endrin	0.01	ug/L	< 0.01	< 0.01
Ethion	0.01	ug/L	< 0.01	< 0.01
Fenitrothion	0.01	ug/L	< 0.01	< 0.01
Fipronil	0.02	ug/L	< 0.02	< 0.02
Hexachlorobenzene (HCB)	0.001	ug/L	< 0.001	< 0.001
Heptachlor Epoxide	0.001	ug/L	< 0.001	< 0.001
Heptachlor	0.001	ug/L	< 0.001	< 0.001
Lindane	0.001	ug/L	< 0.001	< 0.001
Malathion	0.01	ug/L	< 0.01	< 0.01
Methoxychlor	0.02	ug/L	< 0.02	< 0.02
o,p-DDT	0.001	ug/L	< 0.001	< 0.001
Oxychlordane	0.001	ug/L	< 0.001	< 0.001
p,p-DDD	0.001	ug/L	< 0.001	< 0.001
p,p-DDE	0.001	ug/L	< 0.001	< 0.001
p,p-DDT	0.001	ug/L	< 0.001	< 0.001
Parathion Ethyl	0.02	ug/L	< 0.02	< 0.02
Parathion Methyl	0.02	ug/L	< 0.02	< 0.02
Trifluralin	0.01	ug/L	< 0.01	< 0.01
Vinclozolin	0.02	ug/L	< 0.02	< 0.02
<b>Low Level PAH in Water</b>				
Naphthalene	0.01	ug/L	< 0.01	< 0.01
2-Methylnaphthalene	0.01	ug/L	< 0.01	< 0.01
Acenaphthylene	0.01	ug/L	< 0.01	< 0.01
Acenaphthene	0.01	ug/L	< 0.01	< 0.01
Fluorene	0.01	ug/L	< 0.01	< 0.01
Phenanthrene	0.01	ug/L	< 0.01	< 0.01
Anthracene	0.01	ug/L	< 0.01	< 0.01
Fluoranthene	0.01	ug/L	< 0.01	< 0.01
Pyrene	0.01	ug/L	< 0.01	< 0.01
Benz(a)anthracene	0.01	ug/L	< 0.01	< 0.01
Chrysene	0.01	ug/L	< 0.01	< 0.01
Benzo(b)fluoranthene	0.01	ug/L	< 0.01	< 0.01
Benzo(k)fluoranthene	0.01	ug/L	< 0.01	< 0.01
Benzo(a)pyrene	0.01	ug/L	< 0.01	< 0.01
Indeno(1.2.3-c.d)pyrene	0.02	ug/L	< 0.02	< 0.02
Dibenz(a,h)anthracene	0.02	ug/L	< 0.02	< 0.02
Benzo(ghi)perylene	0.02	ug/L	< 0.02	< 0.02
Total PAHs*	0.02	ug/L	< 0.02	< 0.02
<b>PCB in Water</b>				
PCB	0.02	ug/L	< 0.02	< 0.02

Client Sample ID			<b>GG2</b>	<b>GG4A</b>
Sample Matrix			<b>Water</b>	<b>Water</b>
Eurofins Sample No.			<b>L25- Oc0098163</b>	<b>L25- Oc0098164</b>
Date Sampled			<b>Oct 31, 2025</b>	<b>Oct 31, 2025</b>
Test/Reference	LOR	Unit		
Ammonia (as N)	0.02	mg/L	< 0.02	0.09
Chemical Oxygen Demand (COD)	25	mg/L	< 25	< 25
Chloride	5	mg/L	37	59
Conductivity (at 25 °C)	10	uS/cm	200	250
Nitrate (as N)	0.01	mg/L	5.1	4.7
Nitrite (as N)	0.01	mg/L	< 0.01	< 0.01
NOx (as N)	0.01	mg/L	5.1	4.7
Sulfate (as SO4)	1	mg/L	6.8	11
Total Dissolved Solids Dried at 180 °C ± 2 °C	5	mg/L	110	120
Total Kjeldahl Nitrogen (as N) by calculation*	0.2	mg/L	< 0.2	1.1
Total Nitrogen	0.2	mg/L	5.1	5.8
Total Organic Carbon	5	mg/L	< 5	< 5
Total Phosphorus	0.01	mg/L	0.14	0.12
Demeton-S-methyl*	0.02	ug/L	< 0.02	< 0.02
<b>Alkalinity (speciated)</b>				
Bicarbonate Alkalinity (as CaCO3)	5	mg/L	8.4	< 5
Carbonate Alkalinity (as CaCO3)	5	mg/L	< 5	< 5
Hydroxide Alkalinity (as CaCO3)	5	mg/L	< 5	< 5
Total Alkalinity (as CaCO3)	5	mg/L	8.4	< 5
<b>Heavy Metals</b>				
Iron	0.01	mg/L	4.1	1.8
<b>Metals M8 filtered</b>				
Arsenic (filtered)	0.001	mg/L	< 0.001	< 0.001
Cadmium (filtered)	0.0001	mg/L	< 0.0001	< 0.0001
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	0.021	0.003
Lead (filtered)	0.001	mg/L	0.016	< 0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	0.004	0.004
Zinc (filtered)	0.005	mg/L	0.054	0.068
<b>Heavy Metals (filtered)</b>				
Aluminium (filtered)	0.05	mg/L	< 0.05	< 0.05
Manganese (filtered)	0.005	mg/L	< 0.005	0.009
Selenium (filtered)	0.001	mg/L	< 0.001	< 0.001
<b>Eurofins Suite B11C: Na/K/Ca/Mg</b>				
Calcium	0.5	mg/L	1.2	2.0
Magnesium	0.5	mg/L	3.4	4.8
Potassium	0.5	mg/L	1.1	1.7
Sodium	0.5	mg/L	36	45

### Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Welshpool	Nov 03, 2025	7 Days
BTEX - Method: LTM-ORG-2010 TRH C6-C40	Welshpool	Nov 03, 2025	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Welshpool	Nov 03, 2025	7 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Welshpool	Nov 03, 2025	7 Days
Volatile Organics - Method: ARL 132 - Purgeable Organics in Water by GCMS	Welshpool	Nov 03, 2025	7 Days
Base Neutral Pesticides in Water - Method: ARL042 - Base Neutral Pesticides in Water	Welshpool	Nov 03, 2025	7 Days
OCOP in Water - Method: ARL No. 002 - OCOP and PCB in Water	Welshpool	Nov 03, 2025	7 Days
Low Level PAH in Water - Method: ARL005 - Polycyclic Aromatic Hydrocarbons in Water	Welshpool	Nov 03, 2025	14 Days
PCB in Water - Method: ARL002 - OCOP and PCB in Water	Welshpool	Nov 03, 2025	14 Days
Chemical Oxygen Demand (COD) - Method: LTM-INO-4220 Determination of COD in Water	Melbourne	Nov 05, 2025	28 Days
Total Organic Carbon - Method: LTM-INO-4060 Total Organic Carbon in water and soil	Melbourne	Nov 05, 2025	28 Days
Heavy Metals - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Welshpool	Nov 03, 2025	28 Days
Metals M8 filtered - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Welshpool	Nov 03, 2025	28 Days
Heavy Metals (filtered) - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Welshpool	Nov 03, 2025	28 Days
Eurofins Suite B11C: Na/K/Ca/Mg - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Welshpool	Nov 03, 2025	180 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water by GC MSMS	Welshpool	Nov 03, 2025	14 Day
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water by GC MSMS	Welshpool	Nov 03, 2025	14 Day
Ammonia (as N) - Method: ARL303 - Ammonia in Water by Discrete Analyser	Welshpool	Nov 03, 2025	28 Days
Nitrate (as N) - Method: ARL313/319 - NOx in Water by Discrete Analyser	Welshpool	Nov 03, 2025	28 Days
Nitrite (as N) - Method: ARL311 - Nitrite in Water by Discrete Analyser	Welshpool	Nov 03, 2025	2 Days
NOx (as N) - Method: ARL313/319 - NOx in Water by Discrete Analyser	Welshpool	Nov 03, 2025	28 Days
Total Kjeldahl Nitrogen (as N) by calculation - Method: ARL No. 330 - Persulfate Method for Simultaneous Determination of TN & TP	Welshpool	Oct 31, 2025	28 Days
Total Nitrogen - Method: ARL No. 330 - Persulfate Method for Simultaneous Determination of TN & TP	Welshpool	Nov 03, 2025	28 Days
Total Phosphorus - Method: ARL308 - Total Phosphorus in Water by Discrete Analyser	Welshpool	Nov 03, 2025	28 Days
Chloride - Method: ARL305 - Chloride in Water by Discrete Analyser	Welshpool	Nov 03, 2025	28 Days
Sulfate (as SO4)	Welshpool	Nov 03, 2025	28 Days

**Description**

- Method: ARL301 - Sulfate in Water by Discrete Analyser
- Alkalinity (speciated)
- Method: LTM-INO-4250 Alkalinity by Electrometric Titration
- Conductivity (at 25 °C)
- Method: LTM-INO-4030 Conductivity
- Total Dissolved Solids Dried at 180 °C ± 2 °C
- Method: ARL No. 017 - Total Dissolved Solids

Testing Site	Extracted	Holding Time
Welshpool	Nov 03, 2025	14 Days
Welshpool	Nov 03, 2025	28 Days
Welshpool	Nov 03, 2025	7 Days

web: www.eurofins.com.au  
 email: EnviroSales@eurofinsanz.com

**Company Name:** JBS & G Australia (WA) P/L  
**Address:** Level 9 Allendale Square, 77 St George's Terrace  
 Perth  
 WA 6000

**Project Name:** JULY 2025 SUPPORT  
**Project ID:** 70121

**Order No.:**  
**Report #:** 1287068  
**Phone:** 08 9488 0115  
**Fax:**
**Received:** Oct 31, 2025 4:20 PM  
**Due:** Nov 7, 2025  
**Priority:** 5 Day  
**Contact Name:** Ben Chaine

Eurofins Analytical Services Manager : Natalie Hill

Sample Detail						Aluminium (filtered)	Chemical Oxygen Demand (COD)	Demeton-S-methyl	Iron	Manganese (filtered)	Selenium (filtered)	Total Organic Carbon	Metals M8 filtered	Phenols (Speciated)	Volatile Organics	Eurofins Suite B1	Eurofins Suite B11C: Na/K/Ca/Mg	Base Neutral Pesticides in Water	OCOP in Water	Low Level PAH in Water	PCB in Water	Total Dissolved Solids (TDS)	Eurofins Suite B19D	Eurofins Suite B11E	
<b>Perth Laboratory - NATA # 2377 Site # 2370 &amp; 2554</b>						X			X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>							X					X													
<b>External Laboratory</b>								X																	
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID																				
1	GG2	Oct 31, 2025		Water	L25-Oc0098163	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2	GG4A	Oct 31, 2025		Water	L25-Oc0098164	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Test Counts</b>						2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

**Internal Quality Control Review and Glossary**
**General**

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They are included in this QC report where applicable. Additional QC data may be available on request.
- Unless otherwise stated, all soil/sediment/solid results are reported on a dry weight basis.
- Unless otherwise stated, all biota/food results are reported on a wet weight basis on the edible portion.
- For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
- Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds where annotated.
- SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- Information identified in this report with **blue** colour indicates data provided by customers that may have an impact on the results.
- This report replaces any interim results previously issued.

**Holding Times**

Please refer to the 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours before sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and despite any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the sampling date; therefore, compliance with these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether, the holding time is seven days; however, for all other VOCs, such as BTEX or C6-10 TRH, the holding time is 14 days.

**Units**

**mg/kg:** milligrams per kilogram

**mg/L:** milligrams per litre

**ppm:** parts per million

**µg/L:** micrograms per litre

**ppb:** parts per billion

**%:** Percentage

**org/100 mL:** Organisms per 100 millilitres

**NTU:** Nephelometric Turbidity Units

**MPN/100 mL:** Most Probable Number of organisms per 100 millilitres

**CFU:** Colony Forming Unit

**Colour:** Pt-Co Units (CU)

**Terms**

<b>APHA</b>	American Public Health Association
<b>CEC</b>	Cation Exchange Capacity
<b>COC</b>	Chain of Custody
<b>CP</b>	Client Parent - QC was performed on samples pertaining to this report
<b>CRM</b>	Certified Reference Material (ISO17034) - reported as percent recovery.
<b>Dry</b>	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
<b>Duplicate</b>	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
<b>LOR</b>	Limit of Reporting.
<b>LCS</b>	Laboratory Control Sample - reported as percent recovery.
<b>Method Blank</b>	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
<b>NCP</b>	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
<b>RPD</b>	Relative Percent Difference between two Duplicate pieces of analysis.
<b>SPIKE</b>	Addition of the analyte to the sample and reported as percentage recovery.
<b>SRA</b>	Sample Receipt Advice
<b>Surr - Surrogate</b>	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
<b>TBTO</b>	Tributyltin oxide ( <i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
<b>TCLP</b>	Toxicity Characteristic Leaching Procedure
<b>TEQ</b>	Toxic Equivalency Quotient or Total Equivalence
<b>QSM</b>	US Department of Defense Quality Systems Manual Version 6.0
<b>US EPA</b>	United States Environmental Protection Agency
<b>WA DWER</b>	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

**QC - Acceptance Criteria**

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is ≤30%; however, the following acceptance guidelines are equally applicable:

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

**QC Data General Comments**

- Where a result is reported as less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
- Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown are not data from your samples.
- pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
- For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
- Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

**Quality Control Results**

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Method Blank</b>							
Nitrate (as N)	mg/L	< 0.01			0.01	Pass	
Nitrite (as N)	mg/L	< 0.01			0.01	Pass	
NOx (as N)	mg/L	< 0.01			0.01	Pass	
<b>Method Blank</b>							
<b>Eurofins Suite B11C: Na/K/Ca/Mg</b>							
Calcium	mg/L	< 0.5			0.5	Pass	
Magnesium	mg/L	< 0.5			0.5	Pass	
Potassium	mg/L	< 0.5			0.5	Pass	
Sodium	mg/L	< 0.5			0.5	Pass	
<b>Method Blank</b>							
<b>Phenols (Halogenated)</b>							
2-Chlorophenol	mg/L	< 0.001			0.001	Pass	
2.4-Dichlorophenol	mg/L	< 0.001			0.001	Pass	
2.4.5-Trichlorophenol	mg/L	< 0.001			0.001	Pass	
2.4.6-Trichlorophenol	mg/L	< 0.001			0.001	Pass	
2.6-Dichlorophenol	mg/L	< 0.001			0.001	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.001			0.001	Pass	
Pentachlorophenol	mg/L	< 0.001			0.001	Pass	
Tetrachlorophenols - Total	mg/L	< 0.001			0.001	Pass	
<b>Method Blank</b>							
<b>Phenols (non-Halogenated)</b>							
2-Cyclohexyl-4.6-dinitrophenol	mg/L	< 0.003			0.003	Pass	
2-Methyl-4.6-dinitrophenol	mg/L	< 0.001			0.001	Pass	
2-Nitrophenol	mg/L	< 0.001			0.001	Pass	
2.4-Dimethylphenol	mg/L	< 0.001			0.001	Pass	
2.4-Dinitrophenol	mg/L	< 0.001			0.001	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.001			0.001	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.001			0.001	Pass	
4-Nitrophenol	mg/L	< 0.001			0.001	Pass	
Dinoseb	mg/L	< 0.002			0.002	Pass	
Phenol	mg/L	< 0.001			0.001	Pass	
<b>Method Blank</b>							
<b>Low Level PAH in Water</b>							
Total PAHs*	ug/L	-			0.02	N/A	
<b>Method Blank</b>							
Chloride	mg/L	< 5			5	Pass	
Sulfate (as SO4)	mg/L	< 1			1	Pass	
<b>LCS - % Recovery</b>							
<b>Eurofins Suite B11C: Na/K/Ca/Mg</b>							
Calcium	%	98			80-120	Pass	
Magnesium	%	88			80-120	Pass	
Potassium	%	89			80-120	Pass	
Sodium	%	97			80-120	Pass	
<b>LCS - % Recovery</b>							
<b>Phenols (Halogenated)</b>							
2-Chlorophenol	%	77			25-140	Pass	
2.4-Dichlorophenol	%	87			25-140	Pass	
2.4.5-Trichlorophenol	%	108			25-140	Pass	
2.4.6-Trichlorophenol	%	101			25-140	Pass	
2.6-Dichlorophenol	%	92			25-140	Pass	
4-Chloro-3-methylphenol	%	108			25-140	Pass	

Test				Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Tetrachlorophenols - Total				%	91		25-140	Pass	
<b>LCS - % Recovery</b>									
<b>Phenols (non-Halogenated)</b>									
2-Nitrophenol				%	109		25-140	Pass	
2,4-Dimethylphenol				%	113		25-140	Pass	
2-Methylphenol (o-Cresol)				%	91		25-140	Pass	
3&4-Methylphenol (m&p-Cresol)				%	77		25-140	Pass	
Dinoseb				%	92		25-140	Pass	
Phenol				%	105		25-140	Pass	
<b>CRM - % Recovery</b>									
Ammonia (as N)				%	101		80-120	Pass	
<b>CRM - % Recovery</b>									
Ammonia (as N)				%	102		80-120	Pass	
Chloride				%	116		80-120	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>									
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>					Result 1				
TRH C6-C9	L25-Oc0095054	NCP	%	103			70-130	Pass	
TRH C10-C14	L25-Oc0098163	CP	%	104			70-130	Pass	
<b>Spike - % Recovery</b>									
<b>BTEX</b>					Result 1				
Benzene	L25-Oc0098163	CP	%	97			70-130	Pass	
Toluene	L25-Oc0098163	CP	%	115			70-130	Pass	
Ethylbenzene	L25-Oc0098163	CP	%	117			70-130	Pass	
o-Xylene	L25-Oc0095054	NCP	%	110			70-130	Pass	
Xylenes - Total*	L25-Oc0095054	NCP	%	108			70-130	Pass	
<b>Spike - % Recovery</b>									
<b>Volatile Organics</b>					Result 1				
1,1-Dichloroethene	L25-Oc0098163	CP	%	105			70-130	Pass	
1,1,1-Trichloroethane	L25-Oc0098163	CP	%	114			70-130	Pass	
1,2-Dichlorobenzene	L25-Oc0098163	CP	%	110			70-130	Pass	
1,2-Dichloroethane	L25-Oc0089437	NCP	%	96			70-130	Pass	
Trichloroethene	L25-Oc0098163	CP	%	95			70-130	Pass	
<b>Spike - % Recovery</b>									
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>					Result 1				
TRH C6-C10	L25-Oc0095054	NCP	%	100			70-130	Pass	
<b>Spike - % Recovery</b>									
<b>Phenols (Halogenated)</b>					Result 1				
2,4-Dichlorophenol	L25-Oc0098163	CP	%	88			30-130	Pass	
2,4,5-Trichlorophenol	L25-Oc0098163	CP	%	91			30-130	Pass	
4-Chloro-3-methylphenol	L25-Oc0098163	CP	%	106			30-130	Pass	
Pentachlorophenol	L25-Oc0098163	CP	%	106			30-130	Pass	
Tetrachlorophenols - Total	L25-Oc0098163	CP	%	117			30-130	Pass	
<b>Spike - % Recovery</b>									
<b>Phenols (non-Halogenated)</b>					Result 1				
2-Cyclohexyl-4,6-dinitrophenol	L25-Oc0075426	NCP	%	96			30-130	Pass	
2-Methyl-4,6-dinitrophenol	L25-Oc0075426	NCP	%	89			30-130	Pass	
2-Nitrophenol	L25-Oc0098163	CP	%	110			30-130	Pass	
2,4-Dimethylphenol	L25-Oc0098163	CP	%	98			30-130	Pass	
2,4-Dinitrophenol	L25-Oc0075426	NCP	%	109			30-130	Pass	
4-Nitrophenol	L25-Oc0075426	NCP	%	97			30-130	Pass	
Dinoseb	L25-Oc0098163	CP	%	120			30-130	Pass	
Phenol	L25-Oc0098163	CP	%	101			30-130	Pass	
<b>Spike - % Recovery</b>									

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>				Result 1				
TRH >C10-C16	L25-Oc0098163	CP	%	108		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Base Neutral Pesticides in Water</b>				Result 1				
Diuron	L25-Oc0067941	NCP	%	90		60-120	Pass	
Prometryn	L25-Oc0084278	NCP	%	101		60-120	Pass	
Molinate	L25-Oc0084278	NCP	%	86		60-120	Pass	
Terbutryn	L25-Oc0052931	NCP	%	91		60-120	Pass	
Fenitrothion	L25-Oc0089438	NCP	%	105		60-120	Pass	
Fluometuron	L25-Oc0052931	NCP	%	85		60-120	Pass	
Chlorpyrifos	L25-Oc0089438	NCP	%	102		60-120	Pass	
Trifluralin	L25-Oc0084278	NCP	%	83		60-120	Pass	
Dimethoate	L25-Oc0052931	NCP	%	87		60-120	Pass	
Endosulfan I	L25-Oc0082130	NCP	%	99		60-120	Pass	
Fenamiphos	L25-Oc0084278	NCP	%	111		60-120	Pass	
Simazine	L25-Oc0052931	NCP	%	86		60-120	Pass	
Atrazine	L25-Oc0052931	NCP	%	86		60-120	Pass	
Endosulfan II	L25-Oc0084278	NCP	%	83		60-120	Pass	
Endosulfan Sulfate	L25-Oc0084278	NCP	%	88		60-120	Pass	
Propazine	L25-Oc0052931	NCP	%	90		60-120	Pass	
Diclofop Methyl	L25-Oc0052931	NCP	%	100		60-120	Pass	
Tebuconazole	L25-Oc0052931	NCP	%	87		60-120	Pass	
Metolachlor	L25-Oc0052931	NCP	%	95		60-120	Pass	
Hexazinone	L25-Oc0067941	NCP	%	109		60-120	Pass	
Myclobutanil	L25-Oc0084278	NCP	%	83		60-120	Pass	
Azinphos Methyl	M25-Oc0074791	NCP	%	105		60-120	Pass	
Propiconazole	L25-Oc0052931	NCP	%	87		60-120	Pass	
<b>Spike - % Recovery</b>								
<b>OCOP in Water</b>				Result 1				
Aldrin	L25-Oc0067941	NCP	%	109		60-120	Pass	
alpha-BHC (HCH)	L25-Oc0084278	NCP	%	110		60-120	Pass	
beta-BHC (HCH)	L25-Oc0084278	NCP	%	83		60-120	Pass	
delta-BHC (HCH)	L25-Oc0084278	NCP	%	93		60-120	Pass	
Bifenthrin	L25-Oc0084278	NCP	%	98		60-120	Pass	
Bromophos Ethyl	L25-Oc0052931	NCP	%	103		60-120	Pass	
Chlordane	L25-Oc0052931	NCP	%	115		60-120	Pass	
Chlorpyrifos	L25-Oc0052931	NCP	%	119		60-120	Pass	
Dieldrin	L25-Oc0052931	NCP	%	102		60-120	Pass	
Endosulfan I	L25-Oc0084278	NCP	%	92		60-120	Pass	
Endosulfan II	L25-Oc0084278	NCP	%	83		60-120	Pass	
Endosulfan Sulfate	L25-Oc0084278	NCP	%	88		60-120	Pass	
Endrin	L25-Oc0065603	NCP	%	103		60-120	Pass	
Fenitrothion	L25-Oc0082130	NCP	%	99		60-120	Pass	
Hexachlorobenzene (HCB)	L25-Oc0052931	NCP	%	94		60-120	Pass	
Heptachlor Epoxide	L25-Oc0084278	NCP	%	93		60-120	Pass	
Heptachlor	L25-Oc0084278	NCP	%	86		60-120	Pass	
Lindane	L25-Oc0052931	NCP	%	88		60-120	Pass	
Malathion	L25-Oc0089438	NCP	%	100		60-120	Pass	
o,p-DDT	L25-Oc0052931	NCP	%	118		60-120	Pass	
Oxychlordane	L25-Oc0052931	NCP	%	107		60-120	Pass	
p,p-DDD	L25-Oc0052931	NCP	%	85		60-120	Pass	
p,p-DDE	L25-Oc0084278	NCP	%	92		60-120	Pass	
p,p-DDT	L25-Oc0052931	NCP	%	118		60-120	Pass	
Trifluralin	L25-Oc0052931	NCP	%	101		60-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Vinclozolin	L25-Oc0052931	NCP	%	110		60-120	Pass	
<b>Spike - % Recovery</b>								
<b>Low Level PAH in Water</b>				Result 1				
Naphthalene	L25-Oc0084278	NCP	%	100		60-120	Pass	
2-Methylnaphthalene	L25-Oc0084278	NCP	%	110		60-120	Pass	
Acenaphthylene	L25-Oc0084278	NCP	%	87		60-120	Pass	
Acenaphthene	L25-Oc0084278	NCP	%	87		60-120	Pass	
Fluorene	L25-Oc0052931	NCP	%	80		60-120	Pass	
Phenanthrene	L25-Oc0052931	NCP	%	110		60-120	Pass	
Anthracene	L25-Oc0084278	NCP	%	110		60-120	Pass	
Fluoranthene	L25-Oc0084278	NCP	%	80		60-120	Pass	
Pyrene	L25-Oc0084278	NCP	%	87		60-120	Pass	
Benz(a)anthracene	L25-Oc0084278	NCP	%	100		60-120	Pass	
Chrysene	L25-Oc0084278	NCP	%	90		60-120	Pass	
Benzo(b)fluoranthene	L25-Oc0084278	NCP	%	90		60-120	Pass	
Benzo(k)fluoranthene	L25-Oc0084278	NCP	%	83		60-120	Pass	
Benzo(a)pyrene	L25-Oc0084278	NCP	%	96		60-120	Pass	
Indeno(1.2.3-c.d)pyrene	L25-Oc0084278	NCP	%	93		60-120	Pass	
Dibenz(a,h)anthracene	L25-Oc0084278	NCP	%	107		60-120	Pass	
Benzo(ghi)perylene	L25-Oc0084278	NCP	%	110		60-120	Pass	
<b>Spike - % Recovery</b>								
				Result 1				
Chemical Oxygen Demand (COD)	M25-No0009223	NCP	%	114		70-130	Pass	
Total Nitrogen	L25-Oc0097472	NCP	%	93		70-130	Pass	
Total Phosphorus	L25-Oc0097472	NCP	%	118		80-120	Pass	
<b>Spike - % Recovery</b>								
<b>Heavy Metals</b>				Result 1				
Iron	L25-No0002276	NCP	%	109		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Metals M8 filtered</b>				Result 1				
Mercury (filtered)	L25-Oc0093846	NCP	%	99		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Eurofins Suite B11C: Na/K/Ca/Mg</b>				Result 1				
Calcium	L25-Oc0096002	NCP	%	94		75-125	Pass	
Magnesium	L25-Oc0096002	NCP	%	94		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Volatile Organics</b>				Result 1				
1.1-Dichloroethene	L25-Oc0089437	NCP	%	85		70-130	Pass	
1.1.1-Trichloroethane	L25-Oc0089437	NCP	%	99		70-130	Pass	
1.2-Dichlorobenzene	L25-Oc0089437	NCP	%	101		70-130	Pass	
1.2-Dichloroethane	L25-No0008252	NCP	%	112		70-130	Pass	
Trichloroethene	L25-Oc0089437	NCP	%	110		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Base Neutral Pesticides in Water</b>				Result 1				
Diuron	L25-Oc0089438	NCP	%	94		60-120	Pass	
Prometryn	L25-Oc0089438	NCP	%	92		60-120	Pass	
Molinate	L25-Oc0089438	NCP	%	103		60-120	Pass	
Terbutryn	M25-Oc0074791	NCP	%	83		60-120	Pass	
Fenitrothion	L25-Oc0082130	NCP	%	112		60-120	Pass	
Fluometuron	L25-Oc0089438	NCP	%	99		60-120	Pass	
Chlorpyrifos	M25-Oc0074791	NCP	%	112		60-120	Pass	
Trifluralin	L25-Oc0089438	NCP	%	94		60-120	Pass	
Dimethoate	L25-Oc0089438	NCP	%	115		60-120	Pass	
Endosulfan I	L25-Oc0067941	NCP	%	109		60-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Fenamiphos	M25-Oc0074791	NCP	%	109		60-120	Pass	
Simazine	M25-Oc0074791	NCP	%	115		60-120	Pass	
Atrazine	L25-Oc0089438	NCP	%	94		60-120	Pass	
Endosulfan II	L25-Oc0089438	NCP	%	97		60-120	Pass	
Endosulfan Sulfate	L25-Oc0089438	NCP	%	94		60-120	Pass	
Propazine	L25-Oc0089438	NCP	%	98		60-120	Pass	
Diclofop Methyl	L25-Oc0089438	NCP	%	101		60-120	Pass	
Tebuconazole	L25-Oc0089438	NCP	%	88		60-120	Pass	
Metolachlor	L25-Oc0089438	NCP	%	86		60-120	Pass	
Hexazinone	M25-Oc0074791	NCP	%	117		60-120	Pass	
Myclobutanil	M25-Oc0074791	NCP	%	87		60-120	Pass	
Azinphos Methyl	L25-Oc0089438	NCP	%	105		60-120	Pass	
Propiconazole	L25-Oc0089438	NCP	%	98		60-120	Pass	
<b>Spike - % Recovery</b>								
<b>OCOP in Water</b>				Result 1				
Aldrin	L25-Oc0089438	NCP	%	96		60-120	Pass	
alpha-BHC (HCH)	L25-Oc0089438	NCP	%	98		60-120	Pass	
beta-BHC (HCH)	L25-Oc0089438	NCP	%	111		60-120	Pass	
delta-BHC (HCH)	L25-Oc0089438	NCP	%	89		60-120	Pass	
Bifenthrin	L25-Oc0089438	NCP	%	97		60-120	Pass	
Bromophos Ethyl	M25-Oc0074791	NCP	%	106		60-120	Pass	
Chlordane	L25-Oc0089438	NCP	%	103		60-120	Pass	
Chlorpyrifos	L25-Oc0089438	NCP	%	102		60-120	Pass	
Dieldrin	L25-Oc0089438	NCP	%	97		60-120	Pass	
Endosulfan I	L25-Oc0089438	NCP	%	86		60-120	Pass	
Endosulfan II	L25-Oc0089438	NCP	%	92		60-120	Pass	
Endosulfan Sulfate	L25-Oc0089438	NCP	%	92		60-120	Pass	
Endrin	L25-Oc0067941	NCP	%	90		60-120	Pass	
Hexachlorobenzene (HCB)	L25-Oc0089438	NCP	%	105		60-120	Pass	
Heptachlor Epoxide	L25-Oc0089438	NCP	%	112		60-120	Pass	
Heptachlor	L25-Oc0089438	NCP	%	118		60-120	Pass	
Lindane	L25-Oc0082130	NCP	%	109		60-120	Pass	
o,p-DDT	L25-Oc0067941	NCP	%	120		60-120	Pass	
Oxychlordane	L25-Oc0089438	NCP	%	93		60-120	Pass	
p,p-DDD	L25-Oc0067941	NCP	%	105		60-120	Pass	
p,p-DDE	L25-Oc0089438	NCP	%	86		60-120	Pass	
p,p-DDT	L25-Oc0067941	NCP	%	97		60-120	Pass	
Trifluralin	L25-Oc0089438	NCP	%	94		60-120	Pass	
Vinclozolin	L25-Oc0089438	NCP	%	97		60-120	Pass	
<b>Spike - % Recovery</b>								
<b>Low Level PAH in Water</b>				Result 1				
Naphthalene	L25-Oc0091037	NCP	%	93		60-120	Pass	
2-Methylnaphthalene	L25-Oc0089438	NCP	%	100		60-120	Pass	
Acenaphthylene	L25-Oc0089438	NCP	%	100		60-120	Pass	
Acenaphthene	L25-Oc0089438	NCP	%	85		60-120	Pass	
Fluorene	L25-Oc0067941	NCP	%	105		60-120	Pass	
Phenanthrene	L25-Oc0091037	NCP	%	110		60-120	Pass	
Anthracene	L25-Oc0089438	NCP	%	80		60-120	Pass	
Fluoranthene	L25-Oc0089438	NCP	%	90		60-120	Pass	
Pyrene	L25-Oc0089438	NCP	%	84		60-120	Pass	
Benz(a)anthracene	L25-Oc0089438	NCP	%	97		60-120	Pass	
Chrysene	L25-Oc0089438	NCP	%	87		60-120	Pass	
Benzo(b)fluoranthene	L25-Oc0089438	NCP	%	112		60-120	Pass	
Benzo(k)fluoranthene	L25-Oc0089438	NCP	%	108		60-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(a)pyrene	L25-Oc0089438	NCP	%	106			60-120	Pass	
Indeno(1.2.3-c.d)pyrene	L25-Oc0089438	NCP	%	112			60-120	Pass	
Dibenz(a,h)anthracene	L25-Oc0089438	NCP	%	98			60-120	Pass	
Benzo(ghi)perylene	L25-Oc0067941	NCP	%	100			60-120	Pass	
<b>Spike - % Recovery</b>									
				Result 1					
Ammonia (as N)	L25-Oc0098164	CP	%	118			80-120	Pass	
Chloride	L25-Oc0098164	CP	%	108			70-130	Pass	
Nitrate (as N)	L25-Oc0098164	CP	%	115			70-130	Pass	
Nitrite (as N)	L25-Oc0098164	CP	%	97			80-120	Pass	
NOx (as N)	L25-Oc0098164	CP	%	108			80-120	Pass	
Sulfate (as SO4)	L25-Oc0098164	CP	%	114			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>									
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>				Result 1	Result 2	RPD			
TRH C6-C9	L25-No0003664	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
<b>Duplicate</b>									
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>				Result 1	Result 2	RPD			
TRH C6-C10	L25-No0003664	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
<b>Duplicate</b>									
<b>Base Neutral Pesticides in Water</b>				Result 1	Result 2	RPD			
Diuron	L25-Oc0052930	NCP	ug/L	< 0.5	< 0.5	<1	30%	Pass	
Prometryn	L25-Oc0095583	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Molinate	L25-Oc0095583	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Terbutryn	L25-Oc0052930	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Fenitrothion	L25-Oc0095583	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Fluometuron	L25-Oc0052930	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Chlorpyrifos	L25-Oc0095583	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Trifluralin	L25-Oc0095583	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Dimethoate	L25-Oc0052930	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Endosulfan I	L25-Oc0095583	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Fenamiphos	L25-Oc0095583	NCP	ug/L	< 1	< 1	<1	30%	Pass	
Simazine	L25-Oc0052930	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Atrazine	L25-Oc0052930	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Endosulfan II	L25-Oc0095583	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Endosulfan Sulfate	L25-Oc0095583	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Propazine	L25-Oc0095583	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Diclofop Methyl	L25-Oc0052930	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Amitraz	L25-Oc0052930	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass	
Tebuconazole	L25-Oc0095583	NCP	ug/L	< 0.4	< 0.4	<1	30%	Pass	
Metolachlor	L25-Oc0052930	NCP	ug/L	< 0.2	< 0.2	<1	30%	Pass	
Hexazinone	L25-Oc0052930	NCP	ug/L	< 0.4	< 0.4	<1	30%	Pass	
Myclobutanil	L25-Oc0095583	NCP	ug/L	< 0.4	< 0.4	<1	30%	Pass	
Azinphos Methyl	L25-Oc0052930	NCP	ug/L	< 1	< 1	<1	30%	Pass	
Propiconazole	L25-Oc0052930	NCP	ug/L	< 0.4	< 0.4	<1	30%	Pass	
<b>Duplicate</b>									
<b>OCOP in Water</b>				Result 1	Result 2	RPD			
Aldrin	L25-Oc0052930	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
alpha-BHC (HCH)	L25-Oc0095583	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
beta-BHC (HCH)	L25-Oc0095583	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
delta-BHC (HCH)	L25-Oc0095583	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Bifenthrin	L25-Oc0095583	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Bromophos Ethyl	L25-Oc0052930	NCP	ug/L	< 0.005	< 0.005	<1	30%	Pass	
Chlordane	L25-Oc0052930	NCP	ug/L	< 0.002	< 0.002	<1	30%	Pass	

Duplicate								
OCOP in Water				Result 1	Result 2	RPD		
Chlorothalonil	L25-Oc0052930	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Chlorpyrifos	L25-Oc0052930	NCP	ug/L	< 0.005	< 0.005	<1	30%	Pass
Diazinon	L25-Oc0052930	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Dieldrin	L25-Oc0052930	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Endosulfan I	L25-Oc0095583	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Endosulfan II	L25-Oc0095583	NCP	ug/L	< 0.001	0.002	<1	30%	Pass
Endosulfan Sulfate	L25-Oc0095583	NCP	ug/L	0.002	< 0.001	<1	30%	Pass
Endrin	L25-Oc0095583	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Ethion	L25-Oc0052930	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Fenitrothion	L25-Oc0052930	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Fipronil	L25-Oc0052930	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass
Hexachlorobenzene (HCB)	L25-Oc0052930	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Heptachlor Epoxide	L25-Oc0095583	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Heptachlor	L25-Oc0095583	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Lindane	L25-Oc0052930	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Malathion	L25-Oc0052930	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Methoxychlor	L25-Oc0052930	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass
o,p-DDT	L25-Oc0095583	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Oxychlorane	L25-Oc0095583	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
p,p-DDD	L25-Oc0095583	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
p,p-DDE	L25-Oc0095583	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
p,p-DDT	L25-Oc0095583	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Parathion Ethyl	L25-Oc0052930	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass
Parathion Methyl	L25-Oc0052930	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass
Trifluralin	L25-Oc0052930	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Vinclozolin	L25-Oc0052930	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass
Duplicate								
Low Level PAH in Water				Result 1	Result 2	RPD		
Naphthalene	L25-Oc0095583	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
2-Methylnaphthalene	L25-Oc0095583	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Acenaphthylene	L25-Oc0095583	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Acenaphthene	L25-Oc0095583	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Fluorene	L25-Oc0095583	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Phenanthrene	L25-Oc0095583	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Anthracene	L25-Oc0095583	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Fluoranthene	L25-Oc0095583	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Pyrene	L25-Oc0095583	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Benz(a)anthracene	L25-Oc0095583	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Chrysene	L25-Oc0095583	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Benzo(b)fluoranthene	L25-Oc0095583	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Benzo(k)fluoranthene	L25-Oc0095583	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Benzo(a)pyrene	L25-Oc0095583	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Indeno(1.2.3-c.d)pyrene	L25-Oc0095583	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass
Dibenz(a,h)anthracene	L25-Oc0095583	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass
Benzo(ghi)perylene	L25-Oc0095583	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Ammonia (as N)	L25-Oc0098163	CP	mg/L	< 0.02	< 0.02	<1	20%	Pass
Chemical Oxygen Demand (COD)	B25-No0004194	NCP	mg/L	< 25	< 25	<1	30%	Pass
Chloride	L25-Oc0098163	CP	mg/L	37	37	2.0	30%	Pass
Conductivity (at 25 °C)	L25-Oc0096687	NCP	uS/cm	3300	3300	1.0	30%	Pass
Nitrate (as N)	L25-Oc0098163	CP	mg/L	5.1	5.1	<1	30%	Pass
Nitrite (as N)	L25-Oc0098163	CP	mg/L	< 0.01	< 0.01	<1	20%	Pass
NOx (as N)	L25-Oc0098163	CP	mg/L	5.1	5.1	<1	20%	Pass

<b>Duplicate</b>								
				Result 1	Result 2	RPD		
Sulfate (as SO <sub>4</sub> )	L25-Oc0098163	CP	mg/L	6.8	6.6	3.0	30%	Pass
Total Dissolved Solids Dried at 180 °C ± 2 °C	L25-Oc0098376	NCP	mg/L	27000	27000	<1	30%	Pass
Total Nitrogen	L25-Oc0098378	NCP	mg/L	34000	32000	5.0	30%	Pass
Total Organic Carbon	M25-No0001426	NCP	mg/L	20	22	11	30%	Pass
Total Phosphorus	L25-Oc0098378	NCP	mg/L	57	56	2.0	20%	Pass
<b>Duplicate</b>								
<b>Metals M8 filtered</b>				Result 1	Result 2	RPD		
Arsenic (filtered)	L25-Oc0096684	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Cadmium (filtered)	L25-Oc0096684	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Chromium (filtered)	L25-Oc0096684	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Copper (filtered)	L25-Oc0096684	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Lead (filtered)	L25-Oc0096684	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Mercury (filtered)	L25-Oc0096684	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Nickel (filtered)	L25-Oc0096684	NCP	mg/L	0.002	0.002	11	30%	Pass
Zinc (filtered)	L25-Oc0096684	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
<b>Duplicate</b>								
<b>Heavy Metals (filtered)</b>				Result 1	Result 2	RPD		
Aluminium (filtered)	L25-Oc0096684	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass
Manganese (filtered)	L25-Oc0096684	NCP	mg/L	0.11	0.11	<1	30%	Pass
Selenium (filtered)	L25-Oc0096684	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
<b>Duplicate</b>								
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>				Result 1	Result 2	RPD		
TRH C10-C14	L25-Oc0098164	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH C15-C28	L25-Oc0098164	CP	mg/L	< 0.04	< 0.04	<1	30%	Pass
TRH C29-C36	L25-Oc0098164	CP	mg/L	< 0.04	< 0.04	<1	30%	Pass
<b>Duplicate</b>								
<b>Volatile Organics</b>				Result 1	Result 2	RPD		
1.1-Dichloroethane	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1-Dichloroethene	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.1-Trichloroethane	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.1.2-Tetrachloroethane	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.2-Trichloroethane	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.2.2-Tetrachloroethane	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dibromoethane	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichlorobenzene	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichloroethane	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichloropropane	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2.3-Trichloropropane	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2.4-Trimethylbenzene	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3-Dichlorobenzene	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3-Dichloropropane	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3.5-Trimethylbenzene	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.4-Dichlorobenzene	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2-Butanone (MEK)	L25-Oc0098164	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
2-Propanone (Acetone)	L25-Oc0098164	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
4-Chlorotoluene	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	L25-Oc0098164	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Allyl chloride	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromobenzene	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromochloromethane	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromodichloromethane	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromoform	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromomethane	L25-Oc0098164	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass

<b>Duplicate</b>								
<b>Volatile Organics</b>				Result 1	Result 2	RPD		
Carbon disulfide	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Carbon Tetrachloride	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chlorobenzene	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chloroethane	L25-Oc0098164	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Chloroform	L25-Oc0098164	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Chloromethane	L25-Oc0098164	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
cis-1.2-Dichloroethene	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
cis-1.3-Dichloropropene	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibromochloromethane	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibromomethane	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dichlorodifluoromethane	L25-Oc0098164	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Iodomethane	L25-Oc0098164	CP	mg/L	< 0.001	0.001	<1	30%	Pass
Isopropyl benzene (Cumene)	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Methylene Chloride	L25-Oc0098164	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Styrene	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Tetrachloroethene	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
trans-1.2-Dichloroethene	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
trans-1.3-Dichloropropene	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Trichloroethene	L25-Oc0098164	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Trichlorofluoromethane	L25-Oc0098164	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Vinyl chloride	L25-Oc0098164	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass
<b>Duplicate</b>								
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>				Result 1	Result 2	RPD		
TRH >C10-C16	L25-Oc0098164	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH >C16-C34	L25-Oc0098164	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass
TRH >C34-C40	L25-Oc0098164	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass
<b>Duplicate</b>								
<b>Heavy Metals</b>				Result 1	Result 2	RPD		
Iron	L25-Oc0098164	CP	mg/L	1.8	1.7	6.0	30%	Pass
<b>Duplicate</b>								
<b>Eurofins Suite B11C: Na/K/Ca/Mg</b>				Result 1	Result 2	RPD		
Calcium	L25-Oc0098164	CP	mg/L	2.0	1.9	4.0	30%	Pass
Magnesium	L25-Oc0098164	CP	mg/L	4.8	4.8	1.0	30%	Pass
Potassium	L25-Oc0098164	CP	mg/L	1.7	1.7	<1	30%	Pass
Sodium	L25-Oc0098164	CP	mg/L	45	45	<1	30%	Pass

### Comments

Demeton-S-methyl analysis by: MPL, NATA accreditation no. 2901, report reference PGK0093

### Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

### Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.

### Authorised by:

Natalie Hill	Analytical Services Manager
Douglas Todd	Senior Analyst-Organic
Douglas Todd	Senior Analyst-Volatile
Mary Makarios	Senior Analyst-Inorganic
Patrick Patfield	Senior Analyst-Organic
Patrick Patfield	Senior Analyst-Volatile
Sam Becker	Senior Analyst-Inorganic
Sean Sangster	Senior Analyst-Metal



**Kim Rodgers**  
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

\* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request

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Analyte	Reporting Limit mg/L	Price/Sample exc. GST	Sample Bottle Requirement
<b>Groundwater</b>			
<b>Quarterly</b>			
<b>B19D</b> Nutrients #5 TN*, TKN, NOX, NO2, NO3, NH3(as N), TP(as P)	0.2, 0.2, 0.01, 0.01, 0.01, 0.02, 0.01	\$33.90	1 x 500mL Plastic
Chemical Oxygen Demand (COD)	25	\$18.50	
Total Dissolved Solids (TDS)	5	\$7.50	
<b>B11C</b> Cations #1 Alkali Metals (Na, K, Ca, Mg)	0.5	\$10.30	
<b>B11E</b> Anions #1 Cl, SO4, Alkalinity	5, 1, 5	\$15.20	1 x 40mL Vial
TOC	5	\$20.50	
<b>M8FILT</b> - As, Cd, Cr, Cu, Ni, Pb, Zn, Hg	Various	\$14.90	1 x 60mL Metals (Field Filtered)
Additional Dissolved Metals - Al, Mn, Se		\$9.80	1 x 60mL Metals
Total Metals - Fe			
<b>Unit Price per Sample (Exc GST)</b>		<b>\$130.60</b>	
<b>Sample Numbers</b>		<b>8</b>	
<b>Total Price (Exc GST)</b>		<b>\$1,044.80</b>	

Analyte	Reporting Limit mg/L	Price/Sample exc. GST	Sample Bottle Requirement
<b>Groundwater</b>			
<b>6-monthly</b>			
<b>B19D</b> Nutrients #5 TN*, TKN, NOX, NO2, NO3, NH3(as N), TP(as P)	0.2, 0.2, 0.01, 0.01, 0.01, 0.02, 0.01	\$33.90	1 x 500mL Plastic
Chemical Oxygen Demand (COD)	25	\$18.50	
Total Dissolved Solids (TDS)	5	\$7.50	
<b>B11C</b> Cations #1 Alkali Metals (Na, K, Ca, Mg)	0.5	\$10.30	
<b>B11E</b> Anions #1 Cl, SO4, Alkalinity	5, 1, 5	\$15.20	1 x 40mL Vial
TOC	5	\$20.50	
<b>M8FILT</b> - As, Cd, Cr, Cu, Ni, Pb, Zn, Hg	Various	\$14.90	1 x 60mL Metals (Field Filtered)
Additional Dissolved Metals - Al, Mn, Se		\$9.80	1 x 60mL Metals
Total Metals - Fe			
<b>B1</b> TRH, BTEXN	0.02-0.05, 0.001-0.003	\$71.20	1 x 200mL Amber Glass and 2 x 40mL Vials
<b>Polycyclic Aromatic Hydrocarbons (PAH) - LL</b> - inc Acenaphthene, Anthracene, Benz(a)pyrene, Fluoranthene, Naphthalene, Pyrene	0.01 ug/L		
Phenols – Speciated	0.003-0.1		
<b>B15 : OCP, OPP, PCB</b> inc Aldrin/Dieldrin, Chlordane, Chlorpyrifos, Diazinon, DDT, HCB, Heptachlor, Lindane, Malathion (Maldison), Parathion	0.001-0.05 ug/L and 0.02 ug/L	\$43.80	1 x 1L Amber Glass
<b>Base Neutral Pesticides</b> - inc Atrazine Dimethoate, Fenamiphos, Fenthion	0.1-0.5 ug/L	\$90.00	
<b>Volatile Organic Compounds (VOC)</b> inc TCE and PCE	Various	\$45.50	2 x 40mL Vials
<b>Demeton S Methyl</b>	5 ug/L - Subcontract to MPL	\$175.00	1 x 500mL Amber Glass
<b>Unit Price per Sample (Exc GST)</b>		<b>\$582.70</b>	
<b>Sample Numbers</b>		<b>8</b>	
<b>Total Price (Exc GST)</b>		<b>\$4,661.60</b>	

**WA-25-0918-JBS**  
Landfill Compliance

James Young  
WA State Lead (CLM) - Associate  
JBS&G

18th September 2025

Analyte	Reporting Limit mg/L	Price/Sample exc. GST	Sample Bottle Requirement
<b>Leachate</b>			
<b>Quarterly</b>			
pH	0.1 pH unit	\$3.10	1 x 500mL Plastic
EC	1 uS/cm	\$3.10	
Total Suspended Solids (TSS)	5	\$7.50	
Sulphate	1	\$7.50	
Chloride	5	\$7.50	
<b>Total Cations: K</b>	0.5	\$7.15	
<b>B19D Nutrients #5 TN*, TKN, NOX, NO2, NO3, NH3(as N), TP(as P)</b>	0.2, 0.2, 0.01, 0.01, 0.01, 0.02, 0.01	\$33.90	
Chemical Oxygen Demand (COD)	25	\$18.50	1 x 40mL Vial
TOC	5	\$20.50	
<b>Dissolved Metals - Cd, Cr, Cu, Ni, Pb, Zn, Hg, Mn, Mo, Se</b>	Various	\$14.90	1 x 60mL Metals (Field Filtered)
<b>Total Metals - As, Fe</b>		\$11.05	1 x 60mL Metals
<b>B1 TRH, BTEXN</b>	0.02-0.05, 0.001-0.003	\$71.20	1 x 200mL Amber Glass and 2 x 40mL Vials
<b>Polycyclic Aromatic Hydrocarbons (PAH) - LL - inc Acenaphthene, Anthracene, Benz(a)pyrene, Fluoranthene, Naphthalene, Pyrene</b>	0.01 ug/L		
<b>B15 : OCP, OPP, PCB inc Aldrin/Dieldrin, Chlordane, Chlorpyrifos, Diazinon, DDT, HCB, Heptachlor, Lindane, Malathion (Maldison), Parathion</b>	0.001-0.05 ug/L and 0.02 ug/L	\$43.80	1 x 1L Amber Glass
<b>Base Neutral Pesticides inc Atrazine</b>	As per individual analyte	\$90.00	
<b>Volatile Organic Compounds (VOC) inc TCE and PCE</b>	Various	\$45.50	2 x 40mL Vials
<b>Unit Price per Sample (Exc GST)</b>		<b>\$385.20</b>	
<b>Sample Numbers</b>		<b>4</b>	
<b>Total Price (Exc GST)</b>		<b>\$1,540.80</b>	

**JBS & G Australia (WA) P/**  
**Level 9 Allendale Square, 77 St George's Terrace**  
**Perth**  
**WA 6000**



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 Arrangement for the mutual recognition of the  
 equivalence of testing, medical testing, calibration,  
 inspection, proficiency testing scheme providers and  
 reference materials producers reports and certificates.

**Attention:** James Young

**Report** 1284906-W  
 Project name FERNVIEW CULLALLA COMPLIANCE GME  
 Project ID 70121  
 Received Date Oct 27, 2025

Client Sample ID			GG03	GG07
Sample Matrix			Water	Water
Eurofins Sample No.			L25- Oc0081587	L25- Oc0081588
Date Sampled			Oct 27, 2025	Oct 27, 2025
Test/Reference	LOR	Unit		
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>				
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02
TRH C10-C14	0.02	mg/L	< 0.02	< 0.02
TRH C15-C28	0.04	mg/L	< 0.04	< 0.04
TRH C29-C36	0.04	mg/L	< 0.04	< 0.04
TRH C10-C36 (Total)	0.04	mg/L	< 0.04	< 0.04
<b>BTEX</b>				
Benzene	0.001	mg/L	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	117	118
<b>Volatile Organics</b>				
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001
2-Butanone (MEK)	0.005	mg/L	< 0.005	< 0.005
2-Propanone (Acetone)	0.005	mg/L	< 0.005	< 0.005
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	0.005	mg/L	< 0.005	< 0.005
Allyl chloride	0.001	mg/L	< 0.001	< 0.001

Client Sample ID			<b>GG03</b>	<b>GG07</b>
Sample Matrix			<b>Water</b>	<b>Water</b>
Eurofins Sample No.			<b>L25- Oc0081587</b>	<b>L25- Oc0081588</b>
Date Sampled			<b>Oct 27, 2025</b>	<b>Oct 27, 2025</b>
Test/Reference	LOR	Unit		
<b>Volatile Organics</b>				
Benzene	0.001	mg/L	< 0.001	< 0.001
Bromobenzene	0.001	mg/L	< 0.001	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001
Bromoform	0.001	mg/L	< 0.001	< 0.001
Bromomethane	0.005	mg/L	< 0.005	< 0.005
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001
Chloroethane	0.005	mg/L	< 0.005	< 0.005
Chloroform	0.005	mg/L	< 0.005	< 0.005
Chloromethane	0.005	mg/L	< 0.005	< 0.005
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	< 0.001
Dichlorodifluoromethane	0.005	mg/L	< 0.005	< 0.005
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.001	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002
Methylene Chloride	0.005	mg/L	< 0.005	< 0.005
o-Xylene	0.001	mg/L	< 0.001	< 0.001
Styrene	0.001	mg/L	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	< 0.001
Trichlorofluoromethane	0.005	mg/L	< 0.005	< 0.005
Vinyl chloride	0.005	mg/L	< 0.005	< 0.005
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003
Total MAH*	0.003	mg/L	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	117	118
Toluene-d8 (surr.)	1	%	124	128
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>				
Naphthalene <sup>N02</sup>	0.001	mg/L	< 0.001	< 0.001
TRH >C10-C16 less Naphthalene (F2) <sup>*N01</sup>	0.02	mg/L	< 0.02	< 0.02
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	0.02	mg/L	< 0.02	< 0.02
<b>Phenols (Halogenated)</b>				
2-Chlorophenol	0.001	mg/L	< 0.001	< 0.001
2.4-Dichlorophenol	0.001	mg/L	< 0.001	< 0.001
2.4.5-Trichlorophenol	0.001	mg/L	< 0.001	< 0.001
2.4.6-Trichlorophenol	0.001	mg/L	< 0.001	< 0.001
2.6-Dichlorophenol	0.001	mg/L	< 0.001	< 0.001
4-Chloro-3-methylphenol	0.001	mg/L	< 0.001	< 0.001
Pentachlorophenol	0.001	mg/L	< 0.001	< 0.001
Tetrachlorophenols - Total	0.001	mg/L	< 0.001	< 0.001
Total Halogenated Phenol*	0.01	mg/L	< 0.001	< 0.001

Client Sample ID			<b>GG03</b>	<b>GG07</b>
Sample Matrix			<b>Water</b>	<b>Water</b>
Eurofins Sample No.			<b>L25- Oc0081587</b>	<b>L25- Oc0081588</b>
Date Sampled			<b>Oct 27, 2025</b>	<b>Oct 27, 2025</b>
Test/Reference	LOR	Unit		
<b>Phenols (non-Halogenated)</b>				
2-Cyclohexyl-4,6-dinitrophenol	0.003	mg/L	< 0.003	< 0.003
2-Methyl-4,6-dinitrophenol	0.001	mg/L	< 0.001	< 0.001
2-Nitrophenol	0.001	mg/L	< 0.001	< 0.001
2,4-Dimethylphenol	0.001	mg/L	< 0.001	< 0.001
2,4-Dinitrophenol	0.001	mg/L	< 0.001	< 0.001
2-Methylphenol (o-Cresol)	0.001	mg/L	< 0.001	< 0.001
3&4-Methylphenol (m&p-Cresol)	0.001	mg/L	< 0.001	< 0.001
Total cresols*	0.01	mg/L	< 0.01	< 0.01
4-Nitrophenol	0.001	mg/L	< 0.001	< 0.001
Dinoseb	0.002	mg/L	< 0.002	< 0.002
Phenol	0.001	mg/L	< 0.001	< 0.001
Phenol-d6 (surr.)	1	%	136	121
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>				
TRH >C10-C16	0.02	mg/L	< 0.02	< 0.02
TRH >C16-C34	0.05	mg/L	< 0.05	< 0.05
TRH >C34-C40	0.05	mg/L	< 0.05	< 0.05
TRH >C10-C40 (total)*	0.05	mg/L	< 0.05	< 0.05
<b>Base Neutral Pesticides in Water</b>				
Diuron	0.5	ug/L	< 0.5	< 0.5
Prometryn	0.1	ug/L	< 0.1	< 0.1
Molinate	0.1	ug/L	< 0.1	< 0.1
Terbutryn	0.1	ug/L	< 0.1	< 0.1
Fenitrothion	0.1	ug/L	< 0.1	< 0.1
Fluometuron	0.1	ug/L	< 0.1	< 0.1
Chlorpyrifos	0.1	ug/L	< 0.1	< 0.1
Trifluralin	0.1	ug/L	< 0.1	< 0.1
Dimethoate	0.1	ug/L	< 0.1	< 0.1
Endosulfan I	0.1	ug/L	< 0.1	< 0.1
Fenamiphos	1	ug/L	< 1	< 1
Simazine	0.1	ug/L	< 0.1	< 0.1
Atrazine	0.1	ug/L	< 0.1	< 0.1
Endosulfan II	0.1	ug/L	< 0.1	< 0.1
Endosulfan Sulfate	0.1	ug/L	< 0.1	< 0.1
Propazine	0.1	ug/L	< 0.1	< 0.1
Diclofop Methyl	0.1	ug/L	< 0.1	< 0.1
Amitraz	0.1	ug/L	< 0.1	< 0.1
Tebuconazole	0.4	ug/L	< 0.4	< 0.4
Metolachlor	0.2	ug/L	< 0.2	< 0.2
Hexazinone	0.4	ug/L	< 0.4	< 0.4
Myclobutanil	0.4	ug/L	< 0.4	< 0.4
Azinphos Methyl	1	ug/L	< 1	< 1
Propiconazole	0.4	ug/L	< 0.4	< 0.4
<b>OCOP in Water</b>				
Aldrin	0.001	ug/L	< 0.001	< 0.001
alpha-BHC (HCH)	0.001	ug/L	< 0.001	< 0.001
beta-BHC (HCH)	0.001	ug/L	< 0.001	< 0.001
delta-BHC (HCH)	0.001	ug/L	< 0.001	< 0.001
Bifenthrin	0.05	ug/L	< 0.05	< 0.05

Client Sample ID			<b>GG03</b>	<b>GG07</b>
Sample Matrix			<b>Water</b>	<b>Water</b>
Eurofins Sample No.			<b>L25- Oc0081587</b>	<b>L25- Oc0081588</b>
Date Sampled			<b>Oct 27, 2025</b>	<b>Oct 27, 2025</b>
Test/Reference	LOR	Unit		
<b>OCOP in Water</b>				
Bromophos Ethyl	0.005	ug/L	< 0.005	< 0.005
Chlordane	0.002	ug/L	< 0.002	< 0.002
Chlorothalonil	0.01	ug/L	< 0.01	< 0.01
Chlorpyrifos	0.005	ug/L	< 0.005	< 0.005
Diazinon	0.01	ug/L	< 0.01	< 0.01
Dieldrin	0.001	ug/L	< 0.001	< 0.001
Endosulfan I	0.001	ug/L	< 0.001	< 0.001
Endosulfan II	0.001	ug/L	< 0.001	< 0.001
Endosulfan Sulfate	0.001	ug/L	< 0.001	< 0.001
Endrin	0.01	ug/L	< 0.01	< 0.01
Ethion	0.01	ug/L	< 0.01	< 0.01
Fenitrothion	0.01	ug/L	< 0.01	< 0.01
Fipronil	0.02	ug/L	< 0.02	< 0.02
Hexachlorobenzene (HCB)	0.001	ug/L	< 0.001	< 0.001
Heptachlor Epoxide	0.001	ug/L	< 0.001	< 0.001
Heptachlor	0.001	ug/L	< 0.001	< 0.001
Lindane	0.001	ug/L	< 0.001	< 0.001
Malathion	0.01	ug/L	< 0.01	< 0.01
Methoxychlor	0.02	ug/L	< 0.02	< 0.02
o,p-DDT	0.001	ug/L	< 0.001	< 0.001
Oxychlordane	0.001	ug/L	< 0.001	< 0.001
p,p-DDD	0.001	ug/L	< 0.001	< 0.001
p,p-DDE	0.001	ug/L	< 0.001	< 0.001
p,p-DDT	0.001	ug/L	< 0.001	< 0.001
Parathion Ethyl	0.02	ug/L	< 0.02	< 0.02
Parathion Methyl	0.02	ug/L	< 0.02	< 0.02
Trifluralin	0.01	ug/L	< 0.01	< 0.01
Vinclozolin	0.02	ug/L	< 0.02	< 0.02
<b>Low Level PAH in Water</b>				
Naphthalene	0.01	ug/L	< 0.01	< 0.01
2-Methylnaphthalene	0.01	ug/L	< 0.01	< 0.01
Acenaphthylene	0.01	ug/L	< 0.01	< 0.01
Acenaphthene	0.01	ug/L	< 0.01	< 0.01
Fluorene	0.01	ug/L	< 0.01	< 0.01
Phenanthrene	0.01	ug/L	< 0.01	< 0.01
Anthracene	0.01	ug/L	< 0.01	< 0.01
Fluoranthene	0.01	ug/L	< 0.01	< 0.01
Pyrene	0.01	ug/L	< 0.01	< 0.01
Benzo(a)anthracene	0.01	ug/L	< 0.01	< 0.01
Chrysene	0.01	ug/L	< 0.01	< 0.01
Benzo(b)fluoranthene	0.01	ug/L	< 0.01	< 0.01
Benzo(k)fluoranthene	0.01	ug/L	< 0.01	< 0.01
Benzo(a)pyrene	0.01	ug/L	< 0.01	< 0.01
Indeno(1.2.3-c.d)pyrene	0.02	ug/L	< 0.02	< 0.02
Dibenz(a,h)anthracene	0.02	ug/L	< 0.02	< 0.02
Benzo(ghi)perylene	0.02	ug/L	< 0.02	< 0.02
Total PAHs*	0.02	ug/L	< 0.02	< 0.02
<b>PCB in Water</b>				
PCB	0.02	ug/L	< 0.02	< 0.02

Client Sample ID			<b>GG03</b>	<b>GG07</b>
Sample Matrix			<b>Water</b>	<b>Water</b>
Eurofins Sample No.			<b>L25- Oc0081587</b>	<b>L25- Oc0081588</b>
Date Sampled			<b>Oct 27, 2025</b>	<b>Oct 27, 2025</b>
Test/Reference	LOR	Unit		
Ammonia (as N)	0.02	mg/L	0.13	< 0.02
Chemical Oxygen Demand (COD)	25	mg/L	< 25	49
Chloride	5	mg/L	240	130
Conductivity (at 25 °C)	10	uS/cm	890	480
Nitrate (as N)	0.01	mg/L	< 0.01	2.6
Nitrite (as N)	0.01	mg/L	< 0.01	< 0.01
NOx (as N)	0.01	mg/L	< 0.01	2.6
Sulfate (as SO4)	1	mg/L	28	9.5
Total Dissolved Solids Dried at 180 °C ± 2 °C	5	mg/L	470	260
Total Kjeldahl Nitrogen (as N) by calculation*	0.2	mg/L	0.3	0.6
Total Nitrogen	0.2	mg/L	0.3	3.2
Total Organic Carbon	5	mg/L	10	< 100
Total Phosphorus	0.01	mg/L	0.08	0.18
<b>Alkalinity (speciated)</b>				
Bicarbonate Alkalinity (as CaCO3)	5	mg/L	38	12
Carbonate Alkalinity (as CaCO3)	5	mg/L	< 5	< 5
Hydroxide Alkalinity (as CaCO3)	5	mg/L	< 5	< 5
Total Alkalinity (as CaCO3)	5	mg/L	38	12
<b>Heavy Metals</b>				
Iron	0.01	mg/L	4.4	5.9
<b>Metals M8 filtered</b>				
Arsenic (filtered)	0.001	mg/L	0.008	< 0.001
Cadmium (filtered)	0.0001	mg/L	< 0.0001	< 0.0001
Chromium (filtered)	0.001	mg/L	0.010	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	< 0.001	< 0.001
Zinc (filtered)	0.005	mg/L	< 0.005	< 0.005
<b>Heavy Metals (filtered)</b>				
Aluminium (filtered)	0.05	mg/L	0.05	< 0.05
Manganese (filtered)	0.005	mg/L	0.028	0.010
Selenium (filtered)	0.001	mg/L	< 0.001	< 0.001
<b>Eurofins Suite B11C: Na/K/Ca/Mg</b>				
Calcium	0.5	mg/L	2.6	2.8
Magnesium	0.5	mg/L	13	12
Potassium	0.5	mg/L	4.9	2.1
Sodium	0.5	mg/L	160	69

## Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Welshpool	Oct 27, 2025	7 Days
BTEX - Method: LTM-ORG-2010 TRH C6-C40	Welshpool	Oct 29, 2025	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Welshpool	Oct 29, 2025	7 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Welshpool	Oct 29, 2025	7 Days
Volatile Organics - Method: ARL 132 - Purgeable Organics in Water by GCMS	Welshpool	Oct 29, 2025	7 Days
Base Neutral Pesticides in Water - Method: ARL042 - Base Neutral Pesticides in Water	Welshpool	Oct 29, 2025	7 Days
OCOP in Water - Method: ARL No. 002 - OCOP and PCB in Water	Welshpool	Oct 29, 2025	7 Days
Low Level PAH in Water - Method: ARL005 - Polycyclic Aromatic Hydrocarbons in Water	Welshpool	Oct 29, 2025	14 Days
PCB in Water - Method: ARL002 - OCOP and PCB in Water	Welshpool	Oct 29, 2025	14 Days
Chemical Oxygen Demand (COD) - Method: LTM-INO-4220 Determination of COD in Water	Melbourne	Oct 29, 2025	28 Days
Total Organic Carbon - Method: LTM-INO-4060 Total Organic Carbon in water and soil	Melbourne	Oct 29, 2025	28 Days
Heavy Metals - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Welshpool	Oct 29, 2025	28 Days
Metals M8 filtered - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Welshpool	Oct 30, 2025	28 Days
Heavy Metals (filtered) - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Welshpool	Oct 29, 2025	28 Days
Eurofins Suite B11C: Na/K/Ca/Mg - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Welshpool	Oct 29, 2025	180 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water by GC MSMS	Welshpool	Oct 27, 2025	14 Day
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water by GC MSMS	Welshpool	Oct 29, 2025	14 Day
Ammonia (as N) - Method: ARL303 - Ammonia in Water by Discrete Analyser	Welshpool	Oct 29, 2025	28 Days
Nitrate (as N) - Method: ARL313/319 - NOx in Water by Discrete Analyser	Welshpool	Oct 29, 2025	28 Days
Nitrite (as N) - Method: ARL311 - Nitrite in Water by Discrete Analyser	Welshpool	Oct 29, 2025	2 Days
NOx (as N) - Method: ARL313/319 - NOx in Water by Discrete Analyser	Welshpool	Oct 29, 2025	28 Days
Total Kjeldahl Nitrogen (as N) by calculation - Method: ARL No. 330 - Persulfate Method for Simultaneous Determination of TN & TP	Welshpool	Oct 27, 2025	28 Days
Total Nitrogen - Method: ARL No. 330 - Persulfate Method for Simultaneous Determination of TN & TP	Welshpool	Oct 29, 2025	28 Days
Total Phosphorus - Method: ARL308 - Total Phosphorus in Water by Discrete Analyser	Welshpool	Oct 29, 2025	28 Days
Chloride - Method: ARL305 - Chloride in Water by Discrete Analyser	Welshpool	Oct 29, 2025	28 Days
Sulfate (as SO4)	Welshpool	Oct 29, 2025	28 Days

**Description**

- Method: ARL301 - Sulfate in Water by Discrete Analyser
- Alkalinity (speciated)
- Method: LTM-INO-4250 Alkalinity by Electrometric Titration
- Conductivity (at 25 °C)
- Method: LTM-INO-4030 Conductivity
- Total Dissolved Solids Dried at 180 °C ± 2 °C
- Method: ARL No. 017 - Total Dissolved Solids

Testing Site	Extracted	Holding Time
Welshpool	Oct 29, 2025	14 Days
Welshpool	Oct 29, 2025	28 Days
Welshpool	Oct 29, 2025	7 Days



**Perth**  
 46-48 Banksia Road  
 Welshpool  
 WA 6106  
 +61 8 6253 4444  
 NATA# 2377  
 Site# 2370 & 2554

**Melbourne**  
 6 Monterey Road  
 Dandenong South  
 VIC 3175  
 +61 3 8564 5000  
 NATA# 1261  
 Site# 1254

**Geelong**  
 19/8 Lewalan Street  
 Grovedale  
 VIC 3216  
 +61 3 8564 5000  
 NATA# 1261  
 Site# 25403

**Sydney**  
 179 Magowar Road  
 Girraween  
 NSW 2145  
 +61 2 9900 8400  
 NATA# 1261  
 Site# 18217

**Canberra**  
 Unit 1,2 Dacre Street  
 Mitchell  
 ACT 2911  
 +61 2 6113 8091  
 NATA# 1261  
 Site# 25466

**Brisbane**  
 1/21 Smallwood Place  
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 QLD 4172  
 +61 7 3902 4600  
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**Newcastle**  
 1/2 Frost Drive  
 Mayfield West  
 NSW 2304  
 +61 2 4968 8448  
 NATA# 1261  
 Site# 25079

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**Company Name:** JBS & G Australia (WA) P/L  
**Address:** Level 9 Allendale Square, 77 St George's Terrace  
 Perth  
 WA 6000  
**Project Name:** FERNVIEW CULLALLA COMPLIANCE GME  
**Project ID:** 70121  
**Facility Code:**

**Order No.:**  
**Report #:** 1284906  
**Phone:** 08 9488 0115  
**Fax:**

**Received:** Oct 27, 2025 4:10 PM  
**Due:** Nov 3, 2025  
**Priority:** 5 Day  
**Contact Name:** James Young

**Eurofins Analytical Services Manager : Natalie Hill**

Sample Detail						Aluminium (filtered)	Chemical Oxygen Demand (COD)	Iron	Manganese (filtered)	Selenium (filtered)	Total Organic Carbon	Metals M8 filtered	Phenols (Speciated)	Volatile Organics	Eurofins Suite B1	Eurofins Suite B11C: Na/K/Ca/Mg	Base Neutral Pesticides in Water	OCOP in Water	Low Level PAH in Water	PCB in Water	Total Dissolved Solids (TDS)	Eurofins Suite B19D	Eurofins Suite B11E	
<b>Perth Laboratory - NATA # 2377 Site # 2370 &amp; 2554</b>						X		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>							X				X													
<b>External Laboratory</b>																								
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID																			
1	GG03	Oct 27, 2025		Water	L25-Oc0081587	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2	GG07	Oct 27, 2025		Water	L25-Oc0081588	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Test Counts</b>						2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

**Internal Quality Control Review and Glossary**
**General**

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They are included in this QC report where applicable. Additional QC data may be available on request.
- Unless otherwise stated, all soil/sediment/solid results are reported on a dry weight basis.
- Unless otherwise stated, all biota/food results are reported on a wet weight basis on the edible portion.
- For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
- Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds where annotated.
- SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- Information identified in this report with **blue** colour indicates data provided by customers that may have an impact on the results.
- This report replaces any interim results previously issued.

**Holding Times**

Please refer to the 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours before sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and despite any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the sampling date; therefore, compliance with these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether, the holding time is seven days; however, for all other VOCs, such as BTEX or C6-10 TRH, the holding time is 14 days.

**Units**

**mg/kg:** milligrams per kilogram

**mg/L:** milligrams per litre

**ppm:** parts per million

**µg/L:** micrograms per litre

**ppb:** parts per billion

**%:** Percentage

**org/100 mL:** Organisms per 100 millilitres

**NTU:** Nephelometric Turbidity Units

**MPN/100 mL:** Most Probable Number of organisms per 100 millilitres

**CFU:** Colony Forming Unit

**Colour:** Pt-Co Units (CU)

**Terms**

<b>APHA</b>	American Public Health Association
<b>CEC</b>	Cation Exchange Capacity
<b>COC</b>	Chain of Custody
<b>CP</b>	Client Parent - QC was performed on samples pertaining to this report
<b>CRM</b>	Certified Reference Material (ISO17034) - reported as percent recovery.
<b>Dry</b>	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
<b>Duplicate</b>	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
<b>LOR</b>	Limit of Reporting.
<b>LCS</b>	Laboratory Control Sample - reported as percent recovery.
<b>Method Blank</b>	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
<b>NCP</b>	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
<b>RPD</b>	Relative Percent Difference between two Duplicate pieces of analysis.
<b>SPIKE</b>	Addition of the analyte to the sample and reported as percentage recovery.
<b>SRA</b>	Sample Receipt Advice
<b>Surr - Surrogate</b>	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
<b>TBTO</b>	Tributyltin oxide ( <i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
<b>TCLP</b>	Toxicity Characteristic Leaching Procedure
<b>TEQ</b>	Toxic Equivalency Quotient or Total Equivalence
<b>QSM</b>	US Department of Defense Quality Systems Manual Version 6.0
<b>US EPA</b>	United States Environmental Protection Agency
<b>WA DWER</b>	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

**QC - Acceptance Criteria**

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is ≤30%; however, the following acceptance guidelines are equally applicable:

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

**QC Data General Comments**

- Where a result is reported as less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
- Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown are not data from your samples.
- pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
- For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
- Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

**Quality Control Results**

Test				Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code		
<b>Method Blank</b>											
<b>Heavy Metals</b>											
Iron				mg/L	< 0.01		0.01	Pass			
<b>Method Blank</b>											
<b>Eurofins Suite B11C: Na/K/Ca/Mg</b>											
Calcium				mg/L	< 0.5		0.5	Pass			
Magnesium				mg/L	< 0.5		0.5	Pass			
Potassium				mg/L	< 0.5		0.5	Pass			
Sodium				mg/L	< 0.5		0.5	Pass			
<b>Method Blank</b>											
<b>Heavy Metals</b>											
Iron				mg/L	< 0.01		0.01	Pass			
<b>LCS - % Recovery</b>											
<b>Heavy Metals</b>											
Iron				%	108		80-120	Pass			
<b>LCS - % Recovery</b>											
<b>Eurofins Suite B11C: Na/K/Ca/Mg</b>											
Calcium				%	95		80-120	Pass			
Magnesium				%	100		80-120	Pass			
Potassium				%	101		80-120	Pass			
Sodium				%	110		80-120	Pass			
<b>LCS - % Recovery</b>											
<b>Heavy Metals</b>											
Iron				%	110		80-120	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code			
<b>Spike - % Recovery</b>											
<b>Metals M8 filtered</b>											
Arsenic (filtered)					Result 1						
Arsenic (filtered)				L25-Oc0081587	CP	%	101	75-125	Pass		
Cadmium (filtered)				L25-Oc0081587	CP	%	96	75-125	Pass		
Chromium (filtered)				L25-Oc0081587	CP	%	107	75-125	Pass		
Copper (filtered)				L25-Oc0081587	CP	%	102	75-125	Pass		
Lead (filtered)				L25-Oc0081587	CP	%	98	75-125	Pass		
Nickel (filtered)				L25-Oc0081587	CP	%	102	75-125	Pass		
Zinc (filtered)				L25-Oc0081587	CP	%	105	75-125	Pass		
<b>Spike - % Recovery</b>											
<b>Heavy Metals (filtered)</b>											
Aluminium (filtered)					Result 1						
Aluminium (filtered)				L25-Oc0081587	CP	%	107	75-125	Pass		
Manganese (filtered)				L25-Oc0081587	CP	%	103	75-125	Pass		
Selenium (filtered)				L25-Oc0081587	CP	%	94	75-125	Pass		
<b>Spike - % Recovery</b>											
Total Nitrogen					Result 1						
Total Nitrogen				L25-Oc0081588	CP	%	98	70-130	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code			
<b>Duplicate</b>											
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>											
TRH C6-C9					Result 1	Result 2	RPD				
TRH C6-C9				L25-Oc0079167	NCP	mg/L	0.57	0.68	17	30%	Pass
TRH C10-C14				L25-Oc0092686	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH C15-C28				L25-Oc0092686	NCP	mg/L	< 0.04	< 0.04	<1	30%	Pass
TRH C29-C36				L25-Oc0092686	NCP	mg/L	< 0.04	< 0.04	<1	30%	Pass

Duplicate								
BTEX				Result 1	Result 2	RPD		
Benzene	L25-Oc0079167	NCP	mg/L	0.10	0.11	6.0	30%	Pass
Toluene	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Ethylbenzene	L25-Oc0079167	NCP	mg/L	0.058	0.061	7.0	30%	Pass
m&p-Xylenes	L25-Oc0089438	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
o-Xylene	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Xylenes - Total*	L25-Oc0089438	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1.1-Dichloroethane	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1-Dichloroethene	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.1-Trichloroethane	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.1.2-Tetrachloroethane	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.2-Trichloroethane	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.2.2-Tetrachloroethane	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dibromoethane	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichlorobenzene	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichloroethane	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichloropropane	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2.3-Trichloropropane	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2.4-Trimethylbenzene	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3-Dichlorobenzene	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3-Dichloropropane	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3.5-Trimethylbenzene	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.4-Dichlorobenzene	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2-Butanone (MEK)	L25-Oc0098164	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
2-Propanone (Acetone)	L25-Oc0098164	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
4-Chlorotoluene	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	L25-Oc0098164	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Allyl chloride	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromobenzene	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromochloromethane	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromodichloromethane	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromoform	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromomethane	L25-Oc0098164	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Carbon disulfide	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Carbon Tetrachloride	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chlorobenzene	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chloroethane	L25-Oc0098164	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Chloroform	L25-Oc0098164	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Chloromethane	L25-Oc0098164	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
cis-1.2-Dichloroethene	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
cis-1.3-Dichloropropene	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibromochloromethane	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibromomethane	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dichlorodifluoromethane	L25-Oc0098164	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Iodomethane	L25-Oc0098164	NCP	mg/L	< 0.001	0.001	<1	30%	Pass
Isopropyl benzene (Cumene)	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Methylene Chloride	L25-Oc0098164	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Styrene	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Tetrachloroethene	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
trans-1.2-Dichloroethene	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
trans-1.3-Dichloropropene	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Trichloroethene	L25-Oc0098164	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Trichlorofluoromethane	L25-Oc0098164	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Vinyl chloride	L25-Oc0098164	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass

Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	L25-Oc0079167	NCP	mg/L	0.076	0.086	12	30%	Pass
TRH C6-C10	L25-Oc0079167	NCP	mg/L	0.64	0.76	17	30%	Pass
Duplicate								
Phenols (Halogenated)				Result 1	Result 2	RPD		
2-Chlorophenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2,4-Dichlorophenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2,4,5-Trichlorophenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2,4,6-Trichlorophenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2,6-Dichlorophenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
4-Chloro-3-methylphenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Pentachlorophenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Tetrachlorophenols - Total	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Duplicate								
Phenols (non-Halogenated)				Result 1	Result 2	RPD		
2-Cyclohexyl-4,6-dinitrophenol	L25-Oc0085704	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2-Nitrophenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2,4-Dimethylphenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2,4-Dinitrophenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2-Methylphenol (o-Cresol)	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
4-Nitrophenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dinoseb	L25-Oc0085704	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Phenol	L25-Oc0085704	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
TRH >C10-C16	L25-Oc0092686	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH >C16-C34	L25-Oc0092686	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass
TRH >C34-C40	L25-Oc0092686	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Base Neutral Pesticides in Water				Result 1	Result 2	RPD		
Diuron	L25-Oc0089437	NCP	ug/L	< 0.5	< 0.5	<1	30%	Pass
Prometryn	L25-Oc0083483	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Molinate	L25-Oc0083483	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Terbutryn	L25-Oc0089437	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Fenitrothion	L25-Oc0083483	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Fluometuron	L25-Oc0089437	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Chlorpyrifos	L25-Oc0083483	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Trifluralin	L25-Oc0083483	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Dimethoate	L25-Oc0089437	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Endosulfan I	L25-Oc0083483	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Fenamiphos	L25-Oc0083483	NCP	ug/L	< 1	< 1	<1	30%	Pass
Simazine	L25-Oc0089437	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Atrazine	L25-Oc0089437	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Endosulfan II	L25-Oc0083483	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Endosulfan Sulfate	L25-Oc0083483	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Propazine	L25-Oc0083483	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Diclofop Methyl	L25-Oc0089437	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Amitraz	L25-Oc0089437	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Tebuconazole	L25-Oc0083483	NCP	ug/L	< 0.4	< 0.4	<1	30%	Pass
Metolachlor	L25-Oc0089437	NCP	ug/L	< 0.2	< 0.2	<1	30%	Pass
Hexazinone	L25-Oc0089437	NCP	ug/L	< 0.4	< 0.4	<1	30%	Pass
Myclobutanil	L25-Oc0083483	NCP	ug/L	< 0.4	< 0.4	<1	30%	Pass
Azinphos Methyl	L25-Oc0089437	NCP	ug/L	< 1	< 1	<1	30%	Pass
Propiconazole	L25-Oc0089437	NCP	ug/L	< 0.4	< 0.4	<1	30%	Pass

Duplicate									
OCOP in Water					Result 1	Result 2	RPD		
Aldrin	L25-Oc0089437	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
alpha-BHC (HCH)	L25-Oc0083483	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
beta-BHC (HCH)	L25-Oc0083483	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
delta-BHC (HCH)	L25-Oc0083483	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Bifenthrin	L25-Oc0083483	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Bromophos Ethyl	L25-Oc0089437	NCP	ug/L	< 0.005	< 0.005	<1	30%	Pass	
Chlordane	L25-Oc0089437	NCP	ug/L	< 0.002	< 0.002	<1	30%	Pass	
Chlorothalonil	L25-Oc0089437	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Chlorpyrifos	L25-Oc0089437	NCP	ug/L	< 0.005	< 0.005	<1	30%	Pass	
Diazinon	L25-Oc0089437	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Dieldrin	L25-Oc0089437	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Endosulfan I	L25-Oc0083483	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Endosulfan II	L25-Oc0083483	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Endosulfan Sulfate	L25-Oc0083483	NCP	ug/L	0.001	0.001	24	30%	Pass	
Endrin	L25-Oc0083483	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Ethion	L25-Oc0089437	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Fenitrothion	L25-Oc0089437	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Fipronil	L25-Oc0089437	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass	
Hexachlorobenzene (HCB)	L25-Oc0089437	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Heptachlor Epoxide	L25-Oc0083483	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Heptachlor	L25-Oc0083483	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Lindane	L25-Oc0089437	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Malathion	L25-Oc0089437	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Methoxychlor	L25-Oc0089437	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass	
o,p-DDT	L25-Oc0083483	NCP	ug/L	< 0.001	0.001	<1	30%	Pass	
Oxychlordane	L25-Oc0083483	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
p,p-DDD	L25-Oc0083483	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
p,p-DDE	L25-Oc0083483	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
p,p-DDT	L25-Oc0083483	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Parathion Ethyl	L25-Oc0089437	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass	
Parathion Methyl	L25-Oc0089437	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass	
Trifluralin	L25-Oc0089437	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Vinclozolin	L25-Oc0089437	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
Low Level PAH in Water					Result 1	Result 2	RPD		
Naphthalene	L25-Oc0089437	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
2-Methylnaphthalene	L25-Oc0089437	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Acenaphthylene	L25-Oc0089437	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Acenaphthene	L25-Oc0089437	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Fluorene	L25-Oc0089437	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Phenanthrene	L25-Oc0089437	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Anthracene	L25-Oc0089437	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Fluoranthene	L25-Oc0089437	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Pyrene	L25-Oc0089437	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Benz(a)anthracene	L25-Oc0089437	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Chrysene	L25-Oc0089437	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Benzo(b)fluoranthene	L25-Oc0089437	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Benzo(k)fluoranthene	L25-Oc0089437	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Benzo(a)pyrene	L25-Oc0089437	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Indeno(1.2.3-c.d)pyrene	L25-Oc0089437	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass	
Dibenz(a,h)anthracene	L25-Oc0089437	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass	
Benzo(ghi)perylene	L25-Oc0089437	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass	

<b>Duplicate</b>								
				Result 1	Result 2	RPD		
Ammonia (as N)	L25-Oc0082009	NCP	mg/L	1.3	1.3	1.0	20%	Pass
Chemical Oxygen Demand (COD)	L25-Oc0079311	NCP	mg/L	150	150	2.0	30%	Pass
Chloride	L25-Oc0082129	NCP	mg/L	490	500	2.0	30%	Pass
Conductivity (at 25 °C)	L25-Oc0080699	NCP	uS/cm	590	590	<1	30%	Pass
Nitrate (as N)	L25-Oc0082009	NCP	mg/L	1.3	1.3	2.0	30%	Pass
Nitrite (as N)	L25-Oc0082009	NCP	mg/L	0.12	0.13	6.0	20%	Pass
NOx (as N)	L25-Oc0082009	NCP	mg/L	1.4	1.4	1.0	20%	Pass
Sulfate (as SO4)	L25-Oc0081539	NCP	mg/L	89	90	<1	30%	Pass
Total Dissolved Solids Dried at 180 °C ± 2 °C	L25-Oc0081047	NCP	mg/L	27000	26000	4.0	30%	Pass
Total Nitrogen	L25-Oc0081587	CP	mg/L	0.3	0.2	7.0	30%	Pass
Total Organic Carbon	L25-Oc0079312	NCP	mg/L	500	380	27	30%	Pass
<b>Duplicate</b>								
<b>Heavy Metals</b>				Result 1	Result 2	RPD		
Iron	L25-Oc0080695	NCP	mg/L	0.33	0.38	15	30%	Pass
<b>Duplicate</b>								
<b>Metals M8 filtered</b>				Result 1	Result 2	RPD		
Arsenic (filtered)	L25-Oc0080695	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Cadmium (filtered)	L25-Oc0080695	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Chromium (filtered)	L25-Oc0080695	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Copper (filtered)	L25-Oc0080695	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Lead (filtered)	L25-Oc0080695	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Mercury (filtered)	L25-Oc0080695	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Nickel (filtered)	L25-Oc0080695	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Zinc (filtered)	L25-Oc0080695	NCP	mg/L	0.019	0.019	1.0	30%	Pass
<b>Duplicate</b>								
<b>Heavy Metals (filtered)</b>				Result 1	Result 2	RPD		
Aluminium (filtered)	L25-Oc0080695	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass
Manganese (filtered)	L25-Oc0080695	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Selenium (filtered)	L25-Oc0080695	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
<b>Duplicate</b>								
<b>Eurofins Suite B11C: Na/K/Ca/Mg</b>				Result 1	Result 2	RPD		
Calcium	L25-Oc0080695	NCP	mg/L	7.1	6.9	3.0	30%	Pass
Magnesium	L25-Oc0080695	NCP	mg/L	2.1	2.2	4.0	30%	Pass
Potassium	L25-Oc0080695	NCP	mg/L	1.6	1.6	2.0	30%	Pass
Sodium	L25-Oc0080695	NCP	mg/L	11	12	4.0	30%	Pass
<b>Duplicate</b>								
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>				Result 1	Result 2	RPD		
TRH C6-C9	L25-Oc0089594	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH C10-C14	L25-Oc0089438	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH C15-C28	L25-Oc0089438	NCP	mg/L	< 0.04	< 0.04	<1	30%	Pass
TRH C29-C36	L25-Oc0089438	NCP	mg/L	< 0.04	< 0.04	<1	30%	Pass
<b>Duplicate</b>								
<b>BTEX</b>				Result 1	Result 2	RPD		
Benzene	L25-Oc0089594	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Toluene	L25-Oc0089594	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Ethylbenzene	L25-Oc0089594	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
m&p-Xylenes	L25-Oc0089594	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
o-Xylene	L25-Oc0089594	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Xylenes - Total*	L25-Oc0089594	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass

<b>Duplicate</b>								
<b>Volatile Organics</b>				Result 1	Result 2	RPD		
1.1-Dichloroethane	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1-Dichloroethene	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.1-Trichloroethane	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.1.2-Tetrachloroethane	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.2-Trichloroethane	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.2.2-Tetrachloroethane	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dibromoethane	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichlorobenzene	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichloroethane	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichloropropane	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2.3-Trichloropropane	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2.4-Trimethylbenzene	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3-Dichlorobenzene	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3-Dichloropropane	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3.5-Trimethylbenzene	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.4-Dichlorobenzene	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2-Butanone (MEK)	L25-Oc0089438	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
2-Propanone (Acetone)	L25-Oc0089438	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
4-Chlorotoluene	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	L25-Oc0089438	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Allyl chloride	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromobenzene	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromochloromethane	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromodichloromethane	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromoform	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromomethane	L25-Oc0089438	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Carbon disulfide	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Carbon Tetrachloride	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chlorobenzene	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chloroethane	L25-Oc0089438	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Chloroform	L25-Oc0089438	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Chloromethane	L25-Oc0089438	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
cis-1.2-Dichloroethene	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
cis-1.3-Dichloropropene	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibromochloromethane	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibromomethane	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dichlorodifluoromethane	L25-Oc0089438	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Iodomethane	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Isopropyl benzene (Cumene)	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Methylene Chloride	L25-Oc0089438	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Styrene	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Tetrachloroethene	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
trans-1.2-Dichloroethene	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
trans-1.3-Dichloropropene	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Trichloroethene	L25-Oc0089438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Trichlorofluoromethane	L25-Oc0089438	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Vinyl chloride	L25-Oc0089438	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
<b>Duplicate</b>								
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>				Result 1	Result 2	RPD		
Naphthalene	L25-Oc0089594	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
TRH C6-C10	L25-Oc0089594	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass

<b>Duplicate</b>								
<b>Phenols (Halogenated)</b>				Result 1	Result 2	RPD		
2-Chlorophenol	L25-Oc0079167	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2,4-Dichlorophenol	L25-Oc0079167	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2,4,5-Trichlorophenol	L25-Oc0079167	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2,4,6-Trichlorophenol	L25-Oc0079167	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2,6-Dichlorophenol	L25-Oc0079167	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
4-Chloro-3-methylphenol	L25-Oc0079167	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Pentachlorophenol	L25-Oc0079167	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Tetrachlorophenols - Total	L25-Oc0079167	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
<b>Duplicate</b>								
<b>Phenols (non-Halogenated)</b>				Result 1	Result 2	RPD		
2-Cyclohexyl-4,6-dinitrophenol	L25-Oc0079167	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	L25-Oc0079167	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2-Nitrophenol	L25-Oc0079167	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2,4-Dimethylphenol	L25-Oc0079167	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2,4-Dinitrophenol	L25-Oc0079167	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2-Methylphenol (o-Cresol)	L25-Oc0079167	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	L25-Oc0079167	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
4-Nitrophenol	L25-Oc0079167	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dinoseb	L25-Oc0079167	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Phenol	L25-Oc0079167	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
<b>Duplicate</b>								
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>				Result 1	Result 2	RPD		
TRH >C10-C16	L25-Oc0089438	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH >C16-C34	L25-Oc0089438	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass
TRH >C34-C40	L25-Oc0089438	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass
<b>Duplicate</b>								
<b>Base Neutral Pesticides in Water</b>				Result 1	Result 2	RPD		
Diuron	L25-Oc0071314	NCP	ug/L	< 0.5	< 0.5	<1	30%	Pass
Prometryn	L25-Oc0089437	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Molinate	L25-Oc0089437	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Terbutryn	L25-Oc0071314	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Fenitrothion	L25-Oc0089437	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Fluometuron	L25-Oc0071314	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Chlorpyrifos	L25-Oc0089437	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Trifluralin	L25-Oc0089437	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Dimethoate	L25-Oc0071314	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Endosulfan I	L25-Oc0089437	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Fenamiphos	L25-Oc0089437	NCP	ug/L	< 1	< 1	<1	30%	Pass
Simazine	L25-Oc0071314	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Atrazine	L25-Oc0071314	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Endosulfan II	L25-Oc0089437	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Endosulfan Sulfate	L25-Oc0089437	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Propazine	L25-Oc0089437	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Diclofop Methyl	L25-Oc0071314	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Amitraz	L25-Oc0071314	NCP	ug/L	< 0.1	< 0.1	<1	30%	Pass
Tebuconazole	L25-Oc0089437	NCP	ug/L	< 0.4	< 0.4	<1	30%	Pass
Metolachlor	L25-Oc0071314	NCP	ug/L	< 0.2	< 0.2	<1	30%	Pass
Hexazinone	L25-Oc0071314	NCP	ug/L	< 0.4	< 0.4	<1	30%	Pass
Myclobutanil	L25-Oc0089437	NCP	ug/L	< 0.4	< 0.4	<1	30%	Pass
Azinphos Methyl	L25-Oc0071314	NCP	ug/L	< 1	< 1	<1	30%	Pass
Propiconazole	L25-Oc0071314	NCP	ug/L	< 0.4	< 0.4	<1	30%	Pass

Duplicate									
OCOP in Water					Result 1	Result 2	RPD		
Aldrin	L25-Oc0071314	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
alpha-BHC (HCH)	L25-Oc0089437	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
beta-BHC (HCH)	L25-Oc0089437	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
delta-BHC (HCH)	L25-Oc0089437	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Bifenthrin	L25-Oc0089437	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Bromophos Ethyl	L25-Oc0071314	NCP	ug/L	< 0.005	< 0.005	<1	30%	Pass	
Chlordane	L25-Oc0071314	NCP	ug/L	< 0.002	< 0.002	<1	30%	Pass	
Chlorothalonil	L25-Oc0071314	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Chlorpyrifos	L25-Oc0071314	NCP	ug/L	< 0.005	< 0.005	<1	30%	Pass	
Diazinon	L25-Oc0071314	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Dieldrin	L25-Oc0071314	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Endosulfan I	L25-Oc0089437	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Endosulfan II	L25-Oc0089437	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Endosulfan Sulfate	L25-Oc0089437	NCP	ug/L	0.002	< 0.001	<1	30%	Pass	
Endrin	L25-Oc0089437	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Ethion	L25-Oc0071314	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Fenitrothion	L25-Oc0071314	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Fipronil	L25-Oc0071314	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass	
Hexachlorobenzene (HCB)	L25-Oc0071314	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Heptachlor Epoxide	L25-Oc0089437	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Heptachlor	L25-Oc0089437	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Lindane	L25-Oc0071314	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Malathion	L25-Oc0071314	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Methoxychlor	L25-Oc0071314	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass	
o,p-DDT	L25-Oc0089437	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Oxychlordane	L25-Oc0089437	NCP	ug/L	< 0.001	0.001	<1	30%	Pass	
p,p-DDD	L25-Oc0089437	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
p,p-DDE	L25-Oc0089437	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
p,p-DDT	L25-Oc0089437	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Parathion Ethyl	L25-Oc0071314	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass	
Parathion Methyl	L25-Oc0071314	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass	
Trifluralin	L25-Oc0071314	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Vinclozolin	L25-Oc0071314	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
Low Level PAH in Water					Result 1	Result 2	RPD		
Naphthalene	L25-Oc0077432	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
2-Methylnaphthalene	L25-Oc0077432	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Acenaphthylene	L25-Oc0077432	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Acenaphthene	L25-Oc0077432	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Fluorene	L25-Oc0077432	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Phenanthrene	L25-Oc0077432	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Anthracene	L25-Oc0077432	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Fluoranthene	L25-Oc0077432	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Pyrene	L25-Oc0077432	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Benz(a)anthracene	L25-Oc0077432	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Chrysene	L25-Oc0077432	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Benzo(b)fluoranthene	L25-Oc0077432	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Benzo(k)fluoranthene	L25-Oc0077432	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Benzo(a)pyrene	L25-Oc0077432	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Indeno(1.2.3-c.d)pyrene	L25-Oc0077432	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass	
Dibenz(a,h)anthracene	L25-Oc0077432	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass	
Benzo(ghi)perylene	L25-Oc0077432	NCP	ug/L	< 0.02	< 0.02	<1	30%	Pass	

Duplicate								
				Result 1	Result 2	RPD		
Ammonia (as N)	L25-Oc0082129	NCP	mg/L	0.06	0.07	5.0	20%	Pass
Chloride	L25-Oc0080695	NCP	mg/L	16	16	1.0	30%	Pass
Nitrate (as N)	L25-Oc0081539	NCP	mg/L	1.6	1.6	1.0	30%	Pass
Nitrite (as N)	L25-Oc0081539	NCP	mg/L	< 0.01	< 0.01	<1	20%	Pass
NOx (as N)	L25-Oc0081539	NCP	mg/L	1.6	1.6	1.0	20%	Pass
Sulfate (as SO4)	L25-Oc0082129	NCP	mg/L	34	34	1.0	30%	Pass
Total Dissolved Solids Dried at 180 °C ± 2 °C	L25-Oc0081046	NCP	mg/L	31000	31000	<1	30%	Pass
Total Nitrogen	L25-Oc0082021	NCP	mg/L	1.0	0.9	14	30%	Pass
Total Organic Carbon	M25-Oc0088363	NCP	mg/L	4200	4200	<1	30%	Pass
Total Phosphorus	L25-Oc0082021	NCP	mg/L	0.08	0.09	7.0	20%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Iron	L25-Oc0079309	NCP	mg/L	3.5	3.4	4.0	30%	Pass
Duplicate								
Metals M8 filtered				Result 1	Result 2	RPD		
Arsenic (filtered)	L25-Oc0080702	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Cadmium (filtered)	L25-Oc0080702	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Chromium (filtered)	L25-Oc0080702	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Copper (filtered)	L25-Oc0080702	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Lead (filtered)	L25-Oc0080702	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Mercury (filtered)	L25-Oc0080702	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Nickel (filtered)	L25-Oc0080702	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Zinc (filtered)	L25-Oc0080702	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Duplicate								
Heavy Metals (filtered)				Result 1	Result 2	RPD		
Aluminium (filtered)	L25-Oc0080702	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass
Manganese (filtered)	L25-Oc0080702	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Selenium (filtered)	L25-Oc0080702	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Duplicate								
Eurofins Suite B11C: Na/K/Ca/Mg				Result 1	Result 2	RPD		
Calcium	L25-Oc0079309	NCP	mg/L	51	50	2.0	30%	Pass
Magnesium	L25-Oc0079309	NCP	mg/L	36	35	1.0	30%	Pass
Potassium	L25-Oc0079309	NCP	mg/L	46	45	2.0	30%	Pass
Sodium	L25-Oc0079309	NCP	mg/L	58	57	2.0	30%	Pass

## Comments

### Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	N/A
Some samples have been subcontracted	No

### Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.

### Authorised by:

Natalie Hill	Analytical Services Manager
Douglas Todd	Senior Analyst-Organic
Douglas Todd	Senior Analyst-Volatile
Luke Holt	Senior Analyst-Inorganic
Mary Makarios	Senior Analyst-Inorganic
Patrick Patfield	Senior Analyst-Organic
Patrick Patfield	Senior Analyst-Volatile
Sam Becker	Senior Analyst-Inorganic
Sean Sangster	Senior Analyst-Metal



**Kim Rodgers**  
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

\* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request

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# Chain of custody



PROJECT NO (Esdat Ref.): 70121					LAB:					LABORATORY BATCH NO.:																																																																																																																																																																		
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SEND REPORT TO: (1) jbsglabresults@jbsg.com.au; (2) .....@jbsg.com.au; (3) .....@jbsg.com.au																																																																																																																																																																												
PROJECT MANAGER NAME TO APPEAR ON INVOICES: .....							SEND INVOICES TO: invoices@jbsg.com.au																																																																																																																																																																					
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:																																																																																																																																																																												
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Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsvd.; C = Sodium Hydroxide Prsvd; VC = Hydrochloric Acid Prsvd Vial; VS = Sulfuric Acid Prsvd Vial; S = Sulfuric Acid Prsvd; Z = Zinc Prsvd; E = EDTA Prsvd; ST = Sterile Bottle; O = Other

#1284906

## WA-25-0918-JBS Landfill Compliance

James Young  
WA State Lead (CLM) - Associate  
JBS&G

18th September 2025

Analyte	Reporting Limit mg/L	Price/Sample exc. GST	Sample Bottle Requirement
<b>Leachate</b>			
<b>Quarterly</b>			
pH	0.1 pH unit	\$3.10	1 x 500mL Plastic
EC	1 uS/cm	\$3.10	
Total Suspended Solids (TSS)	5	\$7.50	
Sulphate	1	\$7.50	
Chloride	5	\$7.50	
<b>Total Cations: K</b>	0.5	\$7.15	
<b>B19D Nutrients #5 TN*, TKN, NOX, NO2, NO3, NH3(as N), TP(as P)</b>	0.2, 0.2, 0.01, 0.01, 0.01, 0.02, 0.01	\$33.90	
Chemical Oxygen Demand (COD)	25	\$18.50	1 x 40mL Vial
TOC	5	\$20.50	
<b>Dissolved Metals - Cd, Cr, Cu, Ni, Pb, Zn, Hg, Mn, Mo, Se</b>	Various	\$14.90	1 x 60mL Metals (Field Filtered)
<b>Total Metals - As, Fe</b>		\$11.05	1 x 60mL Metals
<b>B1 TRH, BTEXN</b>	0.02-0.05, 0.001-0.003	\$71.20	1 x 200mL Amber Glass and 2 x 40mL Vials
<b>Polycyclic Aromatic Hydrocarbons (PAH) - LL - inc Acenaphthene, Anthracene, Benz(a)pyrene, Fluoranthene, Naphthalene, Pyrene</b>	0.01 ug/L		
<b>B15 : OCP, OPP, PCB inc Aldrin/Dieldrin, Chlordane, Chlorpyrifos, Diazinon, DDT, HCB, Heptachlor, Lindane, Malathion (Maldison), Parathion</b>	0.001-0.05 ug/L and 0.02 ug/L		
<b>Base Neutral Pesticides inc Atrazine</b>	As per individual analyte	\$90.00	
<b>Volatile Organic Compounds (VOC) inc TCE and PCE</b>	Various	\$45.50	2 x 40mL Vials
<b>Unit Price per Sample (Exc GST)</b>		<b>\$385.20</b>	
<b>Sample Numbers</b>		<b>4</b>	
<b>Total Price (Exc GST)</b>		<b>\$1,540.80</b>	

Analyte	Reporting Limit mg/L	Price/Sample exc. GST	Sample Bottle Requirement
<b>Groundwater</b>			
<b>Quarterly</b>			
<b>B19D</b> Nutrients #5 TN*, TKN, NOX, NO2, NO3, NH3(as N), TP(as P)	0.2, 0.2, 0.01, 0.01, 0.01, 0.02, 0.01	\$33.90	1 x 500mL Plastic
Chemical Oxygen Demand (COD)	25	\$18.50	
Total Dissolved Solids (TDS)	5	\$7.50	
<b>B11C</b> Cations #1 Alkali Metals (Na, K, Ca, Mg)	0.5	\$10.30	
<b>B11E</b> Anions #1 Cl, SO4, Alkalinity	5, 1, 5	\$15.20	1 x 40mL Vial
TOC	5	\$20.50	
<b>M8FILT</b> - As, Cd, Cr, Cu, Ni, Pb, Zn, Hg	Various	\$14.90	1 x 60mL Metals (Field Filtered)
Additional Dissolved Metals - Al, Mn, Se		\$9.80	1 x 60mL Metals
Total Metals - Fe			
<b>Unit Price per Sample (Exc GST)</b>		<b>\$130.60</b>	
<b>Sample Numbers</b>		<b>8</b>	
<b>Total Price (Exc GST)</b>		<b>\$1,044.80</b>	

Analyte	Reporting Limit mg/L	Price/Sample exc. GST	Sample Bottle Requirement
<b>Groundwater</b>			
<b>6-monthly</b>			
<b>B19D</b> Nutrients #5 TN*, TKN, NOX, NO2, NO3, NH3(as N), TP(as P)	0.2, 0.2, 0.01, 0.01, 0.01, 0.02, 0.01	\$33.90	1 x 500mL Plastic
Chemical Oxygen Demand (COD)	25	\$18.50	
Total Dissolved Solids (TDS)	5	\$7.50	
<b>B11C</b> Cations #1 Alkali Metals (Na, K, Ca, Mg)	0.5	\$10.30	
<b>B11E</b> Anions #1 Cl, SO4, Alkalinity	5, 1, 5	\$15.20	1 x 40mL Vial
TOC	5	\$20.50	
<b>M8FILT</b> - As, Cd, Cr, Cu, Ni, Pb, Zn, Hg	Various	\$14.90	1 x 60mL Metals (Field Filtered)
Additional Dissolved Metals - Al, Mn, Se		\$9.80	1 x 60mL Metals
Total Metals - Fe			
<b>B1</b> TRH, BTEXN	0.02-0.05, 0.001-0.003		1 x 200mL Amber Glass and 2 x 40mL Vials
<b>Polycyclic Aromatic Hydrocarbons (PAH) - LL</b> - inc Acenaphthene, Anthracene, Benz(a)pyrene, Fluoranthene, Naphthalene, Pyrene	0.01 ug/L	\$71.20	
Phenols – Speciated	0.003-0.1	\$26.60	
<b>B15 : OCP, OPP, PCB</b> inc Aldrin/Dieldrin, Chlordane, Chlorpyrifos, Diazinon, DDT, HCB, Heptachlor, Lindane, Malathion (Maldison), Parathion	0.001-0.05 ug/L and 0.02 ug/L	\$43.80	1 x 1L Amber Glass
<b>Base Neutral Pesticides</b> - inc Atrazine Dimethoate, Fenamiphos, Fenthion	0.1-0.5 ug/L	\$90.00	
<b>Volatile Organic Compounds (VOC)</b> inc TCE and PCE	Various	\$45.50	2 x 40mL Vials
<b>Demeton S Methyl</b>	5 ug/L - Subcontract to MPL	\$175.00	1 x 500mL Amber Glass
<b>Unit Price per Sample (Exc GST)</b>		<b>\$582.70</b>	
<b>Sample Numbers</b>		<b>8</b>	
<b>Total Price (Exc GST)</b>		<b>\$4,661.60</b>	

***Please Note - A \$40 + GST Handling fee will apply per job***

This quotation is valid until 30/06/2026

Please quote the above quotation number on COC with samples.



Natalie Hill | Analytical Services Manager | Eurofins|ARL

Phone. +61 8 6253 4444

Email. [nataliehill@eurofins.com](mailto:nataliehill@eurofins.com)

**STANDARD TERMS AND CONDITIONS OF SALE (AUSTRALIA)**

[Please click here to download a copy of the Standard Terms and Conditions.](#)



## SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **EP2518001**

Client	: JBS&G AUSTRALIA PTY LTD	Laboratory	: Environmental Division Perth
Contact	: Ben Chaine	Contact	: Rhiannon Steere
Address	: LEVEL 9, 77 ST GEORGES TERRACE PERTH 6000	Address	: 26 Rigali Way Wangara WA Australia 6065
E-mail	: bchaine@jbsg.com.au	E-mail	: rhiannon.steere@alsglobal.com
Telephone	: ----	Telephone	: 08 9406 1306
Facsimile	: ----	Facsimile	: +61-8-9406 1399
Project	: 701212	Page	: 1 of 3
Order number	: 701212	Quote number	: EP2025JBSENV0001 (EN/000 Custom Quote)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: B Chaine		

### Dates

Date Samples Received	: 29-Oct-2025 16:30	Issue Date	: 30-Oct-2025
Client Requested Due Date	: 07-Nov-2025	Scheduled Reporting Date	: <b>07-Nov-2025</b>

### Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 1	Temperature	: 8.5 - Ice present
Receipt Detail	:	No. of samples received / analysed	: 1 / 1

### General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- Please see scanned COC for sample discrepancies: extra samples , samples not received etc.
- Please direct any queries related to sample condition / numbering / breakages to Sample Receipt (Samples.Perth@alsglobal.com)
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Perth, NATA accreditation no. 825, site no. 15847.
- Please direct any turnaround / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- **pH analysis should be conducted within 6 hours of sampling.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.
- **If Scheduled Reporting Date shown above is earlier than Client Requested Due Date, this reflects the date that a preliminary report is scheduled to be issued. Client Requested Due Date reflects the date that the final report is to be issued.**



## Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

### Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EA015H Total Dissolved Solids - Standard Level	WATER - EG020F Dissolved Metals by ICP/MS	WATER - EP005 Total Organic Carbon (TOC)	WATER - EP026SP Chemical Oxygen Demand (COD)	WATER - NT-01 & 02 Ca, Mg, Na, K, Chloride, SO4, Alkalinity	WATER - NT-08 Total Nitrogen + NO2 + NO3 + NH3 + Total P	WATER - W-05 TRH/BTEX/N8 Metals
EP2518001-001	28-Oct-2025 00:00	QC02	✓	✓	✓	✓	✓	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EG020T Total Metals by ICP/MS (including digestion)	WATER - EP074 (water) Volatile Organic Compounds	WATER - EP131B-ST Super Ultra Trace PCB's to Meet ANZECC and	WATER - EP132A Phenols Ultratrace - 16 analytes	WATER - EP132-LL Super Ultra Trace PAH	WATER - UTO-9W Ultratrace OC/OP (extended) Pesticides
EP2518001-001	28-Oct-2025 00:00	QC02	✓	✓	✓	✓	✓	✓

### Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

### Requested Deliverables

#### ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email invoices@jbsg.com.au

#### Ben Chaine

- \*AU Certificate of Analysis - NATA (COA)
- \*AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- \*AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ESDAT (ESDAT)

Email bchaine@jbsg.com.au  
Email bchaine@jbsg.com.au  
Email bchaine@jbsg.com.au  
Email bchaine@jbsg.com.au  
Email bchaine@jbsg.com.au  
Email bchaine@jbsg.com.au

#### ESDAT LABSYNC RESULTS

- EDI Format - ESDAT (ESDAT)

Email jbsglabresults@jbsg.com.au

Issue Date : 30-Oct-2025  
Page : 3 of 3  
Work Order : EP2518001 Amendment 0  
Client : JBS&G AUSTRALIA PTY LTD



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### ***Inter-Laboratory Testing***

Analysis conducted by ALS Sydney, NATA accreditation no. 825, site no. 10911 (Chemistry / Biology).

(WATER) EP132A: Phenolic Compounds

(WATER) EP132B: Polynuclear Aromatic Hydrocarbons

(WATER) EP234A: OP Pesticides

(WATER) EP131A: Organochlorine Pesticides

(WATER) EP026SP: Chemical Oxygen Demand (Spectrophotometric)

(WATER) EP131B: Polychlorinated Biphenyls (as Aroclors)

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## CERTIFICATE OF ANALYSIS

**Work Order** : EP2518001  
**Client** : JBS&G AUSTRALIA PTY LTD  
**Contact** : Ben Chaine  
**Address** : LEVEL 9, 77 ST GEORGES TERRACE  
PERTH 6000  
**Telephone** : ----  
**Project** : 701212  
**Order number** : 701212  
**C-O-C number** : ----  
**Sampler** : B Chaine  
**Site** : ----  
**Quote number** : EN/000 Custom Quote  
**No. of samples received** : 1  
**No. of samples analysed** : 1

**Page** : 1 of 16  
**Laboratory** : Environmental Division Perth  
**Contact** : Rhiannon Steere  
**Address** : 26 Rigali Way Wangara WA Australia 6065  
**Telephone** : 08 9406 1306  
**Date Samples Received** : 29-Oct-2025 16:30  
**Date Analysis Commenced** : 30-Oct-2025  
**Issue Date** : 07-Nov-2025 16:36



Accreditation No. 825  
Accredited for compliance with  
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Canhuang Ke	Inorganics Supervisor	Perth Inorganics, Wangara, WA
Daniel Fisher	Inorganics Analyst	Perth Inorganics, Wangara, WA
Edwandy Fadjjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Efua Wilson	Metals Chemist	Perth Inorganics, Wangara, WA
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
John Horwood	Organic Supervisor	Perth Organics, Wangara, WA
Louise Kinkella	Instrument Chemist	Perth Inorganics, Wangara, WA



## General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.  
LOR = Limit of reporting  
^ = This result is computed from individual analyte detections at or above the level of reporting  
ø = ALS is not NATA accredited for these tests.  
~ = Indicates an estimated value.

- EP234: Poor matrix spike recovery for particular compounds due to matrix interferences and high matrix spike recovery has been noted for particular compounds due to ion enhancement.
- EP131A: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP132-LL: Where reported, Total PAH is the sum of the reported concentrations of all PAHs at or above the LOR.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074: Where reported, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- EP074: Where reported, Total Trimethylbenzenes is the sum of the reported concentrations of 1.2.3-Trimethylbenzene, 1.2.4-Trimethylbenzene and 1.3.5-Trimethylbenzene at or above the LOR.
- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO<sub>2</sub> and Fluoride to the Anions.
- EA015H (Total Dissolved Solids): TDS for sample #1 biasing high due to possible sample matrix interferences.
- EP132: Where reported, Total PAH reported as the sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene and Benzo(g,h,i)perylene.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC02	----	----	----	----
Sampling date / time				28-Oct-2025 00:00	----	----	----	----	
Compound	CAS Number	LOR	Unit	EP2518001-001	-----	-----	-----	-----	
				Result	----	----	----	----	
<b>EA015: Total Dissolved Solids dried at 180 ± 5 °C</b>									
Total Dissolved Solids @180°C	----	1	mg/L	<b>2210</b>	----	----	----	----	
<b>ED037P: Alkalinity by PC Titrator</b>									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	----	----	----	----	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<b>14</b>	----	----	----	----	
Total Alkalinity as CaCO3	----	1	mg/L	<b>14</b>	----	----	----	----	
<b>ED041G: Sulfate (Turbidimetric) as SO4 2- by DA</b>									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<b>292</b>	----	----	----	----	
<b>ED045G: Chloride by Discrete Analyser</b>									
Chloride	16887-00-6	1	mg/L	<b>879</b>	----	----	----	----	
<b>ED093F: Dissolved Major Cations</b>									
Calcium	7440-70-2	1	mg/L	<b>26</b>	----	----	----	----	
Magnesium	7439-95-4	1	mg/L	<b>82</b>	----	----	----	----	
Sodium	7440-23-5	1	mg/L	<b>475</b>	----	----	----	----	
Potassium	7440-09-7	1	mg/L	<b>7</b>	----	----	----	----	
<b>EG020F: Dissolved Metals by ICP-MS</b>									
Aluminium	7429-90-5	0.01	mg/L	<0.01	----	----	----	----	
Arsenic	7440-38-2	0.001	mg/L	<b>0.009</b>	----	----	----	----	
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----	
Chromium	7440-47-3	0.001	mg/L	<b>0.002</b>	----	----	----	----	
Copper	7440-50-8	0.001	mg/L	<0.001	----	----	----	----	
Nickel	7440-02-0	0.001	mg/L	<b>0.002</b>	----	----	----	----	
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----	
Zinc	7440-66-6	0.005	mg/L	<0.005	----	----	----	----	
Manganese	7439-96-5	0.001	mg/L	<b>0.037</b>	----	----	----	----	
Selenium	7782-49-2	0.01	mg/L	<0.01	----	----	----	----	
<b>EG020T: Total Metals by ICP-MS</b>									



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC02	----	----	----	----
Sampling date / time				28-Oct-2025 00:00	----	----	----	----	
Compound	CAS Number	LOR	Unit	EP2518001-001	-----	-----	-----	-----	
				Result	---	---	---	---	
<b>EG020T: Total Metals by ICP-MS - Continued</b>									
Iron	7439-89-6	0.05	mg/L	51.9	----	----	----	----	
<b>EG035F: Dissolved Mercury by FIMS</b>									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----	
<b>EK055G: Ammonia as N by Discrete Analyser</b>									
Ammonia as N	7664-41-7	0.01	mg/L	0.19	----	----	----	----	
<b>EK057G: Nitrite as N by Discrete Analyser</b>									
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	----	----	----	----	
<b>EK058G: Nitrate as N by Discrete Analyser</b>									
Nitrate as N	14797-55-8	0.01	mg/L	<0.01	----	----	----	----	
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser</b>									
Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	----	----	----	----	
<b>EK061G: Total Kjeldahl Nitrogen By Discrete Analyser</b>									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.3	----	----	----	----	
<b>EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser</b>									
<sup>^</sup> Total Nitrogen as N	----	0.1	mg/L	0.3	----	----	----	----	
<b>EK067G: Total Phosphorus as P by Discrete Analyser</b>									
Total Phosphorus as P	----	0.01	mg/L	<0.01	----	----	----	----	
<b>EN055: Ionic Balance</b>									
∅ Total Anions	----	0.01	meq/L	31.2	----	----	----	----	
∅ Total Cations	----	0.01	meq/L	28.9	----	----	----	----	
∅ Ionic Balance	----	0.01	%	3.78	----	----	----	----	
<b>EP005: Total Organic Carbon (TOC)</b>									
Total Organic Carbon	----	1	mg/L	7	----	----	----	----	
<b>EP026SP: Chemical Oxygen Demand (Spectrophotometric)</b>									
Chemical Oxygen Demand	----	10	mg/L	<10	----	----	----	----	
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>									
Benzene	71-43-2	1	µg/L	<1	----	----	----	----	
Toluene	108-88-3	2	µg/L	<2	----	----	----	----	



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC02	----	----	----	----
Sampling date / time				28-Oct-2025 00:00	----	----	----	----	
Compound	CAS Number	LOR	Unit	EP2518001-001	-----	-----	-----	-----	
				Result	---	---	---	---	
<b>EP074A: Monocyclic Aromatic Hydrocarbons - Continued</b>									
Ethylbenzene	100-41-4	2	µg/L	<2	----	----	----	----	
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	----	----	----	----	
Styrene	100-42-5	5	µg/L	<5	----	----	----	----	
ortho-Xylene	95-47-6	2	µg/L	<2	----	----	----	----	
Isopropylbenzene	98-82-8	5	µg/L	<5	----	----	----	----	
n-Propylbenzene	103-65-1	5	µg/L	<5	----	----	----	----	
1.3.5-Trimethylbenzene	108-67-8	5	µg/L	<5	----	----	----	----	
sec-Butylbenzene	135-98-8	5	µg/L	<5	----	----	----	----	
1.2.4-Trimethylbenzene	95-63-6	5	µg/L	<5	----	----	----	----	
tert-Butylbenzene	98-06-6	5	µg/L	<5	----	----	----	----	
p-Isopropyltoluene	99-87-6	5	µg/L	<5	----	----	----	----	
n-Butylbenzene	104-51-8	5	µg/L	<5	----	----	----	----	
<b>EP074B: Oxygenated Compounds</b>									
Vinyl Acetate	108-05-4	50	µg/L	<50	----	----	----	----	
2-Butanone (MEK)	78-93-3	50	µg/L	<50	----	----	----	----	
4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L	<50	----	----	----	----	
2-Hexanone (MBK)	591-78-6	50	µg/L	<50	----	----	----	----	
<b>EP074C: Sulfonated Compounds</b>									
Carbon disulfide	75-15-0	5	µg/L	<5	----	----	----	----	
<b>EP074D: Fumigants</b>									
2.2-Dichloropropane	594-20-7	5	µg/L	<5	----	----	----	----	
1.2-Dichloropropane	78-87-5	5	µg/L	<5	----	----	----	----	
cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	<5	----	----	----	----	
trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	<5	----	----	----	----	
1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	----	----	----	----	
<b>EP074E: Halogenated Aliphatic Compounds</b>									
Dichlorodifluoromethane	75-71-8	50	µg/L	<50	----	----	----	----	



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC02	----	----	----	----
Sampling date / time				28-Oct-2025 00:00	----	----	----	----	
Compound	CAS Number	LOR	Unit	EP2518001-001	-----	-----	-----	-----	
				Result	----	----	----	----	
<b>EP074E: Halogenated Aliphatic Compounds - Continued</b>									
Chloromethane	74-87-3	50	µg/L	<50	----	----	----	----	
Vinyl chloride	75-01-4	50	µg/L	<50	----	----	----	----	
Bromomethane	74-83-9	50	µg/L	<50	----	----	----	----	
Chloroethane	75-00-3	50	µg/L	<50	----	----	----	----	
Trichlorofluoromethane	75-69-4	50	µg/L	<50	----	----	----	----	
1,1-Dichloroethene	75-35-4	5	µg/L	<5	----	----	----	----	
Iodomethane	74-88-4	5	µg/L	<5	----	----	----	----	
trans-1,2-Dichloroethene	156-60-5	5	µg/L	<5	----	----	----	----	
1,1-Dichloroethane	75-34-3	5	µg/L	<5	----	----	----	----	
cis-1,2-Dichloroethene	156-59-2	5	µg/L	<5	----	----	----	----	
1,1,1-Trichloroethane	71-55-6	5	µg/L	<5	----	----	----	----	
1,1-Dichloropropylene	563-58-6	5	µg/L	<5	----	----	----	----	
Carbon Tetrachloride	56-23-5	5	µg/L	<5	----	----	----	----	
1,2-Dichloroethane	107-06-2	5	µg/L	<5	----	----	----	----	
Trichloroethene	79-01-6	5	µg/L	<5	----	----	----	----	
Dibromomethane	74-95-3	5	µg/L	<5	----	----	----	----	
1,1,2-Trichloroethane	79-00-5	5	µg/L	<5	----	----	----	----	
1,3-Dichloropropane	142-28-9	5	µg/L	<5	----	----	----	----	
Tetrachloroethene	127-18-4	5	µg/L	<5	----	----	----	----	
1,1,1,2-Tetrachloroethane	630-20-6	5	µg/L	<5	----	----	----	----	
trans-1,4-Dichloro-2-butene	110-57-6	5	µg/L	<5	----	----	----	----	
cis-1,4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	----	----	----	----	
1,1,2,2-Tetrachloroethane	79-34-5	5	µg/L	<5	----	----	----	----	
1,2,3-Trichloropropane	96-18-4	5	µg/L	<5	----	----	----	----	
Pentachloroethane	76-01-7	5	µg/L	<5	----	----	----	----	
1,2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	----	----	----	----	
Hexachlorobutadiene	87-68-3	5	µg/L	<5	----	----	----	----	



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	QC02	----	----	----	----
Sampling date / time			28-Oct-2025 00:00	----	----	----	----	
Compound	CAS Number	LOR	Unit	EP2518001-001	-----	-----	-----	-----
				Result	---	---	---	---
<b>EP074E: Halogenated Aliphatic Compounds - Continued</b>								
<b>EP074F: Halogenated Aromatic Compounds</b>								
Chlorobenzene	108-90-7	5	µg/L	<5	----	----	----	----
Bromobenzene	108-86-1	5	µg/L	<5	----	----	----	----
2-Chlorotoluene	95-49-8	5	µg/L	<5	----	----	----	----
4-Chlorotoluene	106-43-4	5	µg/L	<5	----	----	----	----
1,3-Dichlorobenzene	541-73-1	5	µg/L	<5	----	----	----	----
1,4-Dichlorobenzene	106-46-7	5	µg/L	<5	----	----	----	----
1,2-Dichlorobenzene	95-50-1	5	µg/L	<5	----	----	----	----
1,2,4-Trichlorobenzene	120-82-1	5	µg/L	<5	----	----	----	----
1,2,3-Trichlorobenzene	87-61-6	5	µg/L	<5	----	----	----	----
<b>EP074G: Trihalomethanes</b>								
Chloroform	67-66-3	5	µg/L	<5	----	----	----	----
Bromodichloromethane	75-27-4	5	µg/L	<5	----	----	----	----
Dibromochloromethane	124-48-1	5	µg/L	<5	----	----	----	----
Bromoform	75-25-2	5	µg/L	<5	----	----	----	----
<b>EP074H: Naphthalene</b>								
Naphthalene	91-20-3	5	µg/L	<5	----	----	----	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
C6 - C9 Fraction	----	0.02	mg/L	<0.02	----	----	----	----
C10 - C14 Fraction	----	0.05	mg/L	<0.05	----	----	----	----
C15 - C28 Fraction	----	0.10	mg/L	<0.10	----	----	----	----
C29 - C36 Fraction	----	0.05	mg/L	<0.05	----	----	----	----
^ C10 - C36 Fraction (sum)	----	0.05	mg/L	<0.05	----	----	----	----
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
C6 - C10 Fraction	C6_C10	0.02	mg/L	<0.02	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	0.02	mg/L	<0.02	----	----	----	----
>C10 - C16 Fraction	----	0.10	mg/L	<0.10	----	----	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC02	----	----	----	----
Sampling date / time				28-Oct-2025 00:00	----	----	----	----	
Compound	CAS Number	LOR	Unit	EP2518001-001	-----	-----	-----	-----	
				Result	---	---	---	---	
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued</b>									
>C16 - C34 Fraction	----	0.10	mg/L	<0.10	----	----	----	----	
>C34 - C40 Fraction	----	0.10	mg/L	<0.10	----	----	----	----	
<sup>^</sup> >C10 - C40 Fraction (sum)	----	0.10	mg/L	<0.10	----	----	----	----	
<sup>^</sup> >C10 - C16 Fraction minus Naphthalene (F2)	----	0.10	mg/L	<0.10	----	----	----	----	
<b>EP080: BTEXN</b>									
Benzene	71-43-2	0.001	mg/L	<0.001	----	----	----	----	
Toluene	108-88-3	0.002	mg/L	<0.002	----	----	----	----	
Ethylbenzene	100-41-4	0.002	mg/L	<0.002	----	----	----	----	
meta- & para-Xylene	108-38-3 106-42-3	0.002	mg/L	<0.002	----	----	----	----	
ortho-Xylene	95-47-6	0.002	mg/L	<0.002	----	----	----	----	
<sup>^</sup> Total Xylenes	----	0.002	mg/L	<0.002	----	----	----	----	
<sup>^</sup> Sum of BTEX	----	0.001	mg/L	<0.001	----	----	----	----	
Naphthalene	91-20-3	0.005	mg/L	<0.005	----	----	----	----	
<b>EP131A: Organochlorine Pesticides</b>									
Aldrin	309-00-2	0.010	µg/L	<0.010	----	----	----	----	
alpha-BHC	319-84-6	0.010	µg/L	<0.010	----	----	----	----	
beta-BHC	319-85-7	0.010	µg/L	<0.010	----	----	----	----	
delta-BHC	319-86-8	0.010	µg/L	<0.010	----	----	----	----	
4,4'-DDD	72-54-8	0.010	µg/L	<0.010	----	----	----	----	
4,4'-DDE	72-55-9	0.010	µg/L	<0.010	----	----	----	----	
4,4'-DDT	50-29-3	0.010	µg/L	<0.010	----	----	----	----	
<sup>^</sup> Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-29-3	0.010	µg/L	<0.010	----	----	----	----	
Dieldrin	60-57-1	0.010	µg/L	<0.010	----	----	----	----	
alpha-Endosulfan	959-98-8	0.010	µg/L	<0.010	----	----	----	----	
beta-Endosulfan	33213-65-9	0.010	µg/L	<0.010	----	----	----	----	
Endosulfan sulfate	1031-07-8	0.010	µg/L	<0.010	----	----	----	----	



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC02	----	----	----	----
Sampling date / time				28-Oct-2025 00:00	----	----	----	----	
Compound	CAS Number	LOR	Unit	EP2518001-001	-----	-----	-----	-----	
				Result	---	---	---	---	
<b>EP131A: Organochlorine Pesticides - Continued</b>									
<sup>^</sup> Endosulfan (sum)	115-29-7	0.010	µg/L	<0.010	----	----	----	----	
Endrin	72-20-8	0.010	µg/L	<0.010	----	----	----	----	
Endrin aldehyde	7421-93-4	0.010	µg/L	<0.010	----	----	----	----	
Endrin ketone	53494-70-5	0.010	µg/L	<0.010	----	----	----	----	
Heptachlor	76-44-8	0.005	µg/L	<0.005	----	----	----	----	
Heptachlor epoxide	1024-57-3	0.010	µg/L	<0.010	----	----	----	----	
Hexachlorobenzene (HCB)	118-74-1	0.010	µg/L	<0.010	----	----	----	----	
gamma-BHC - (Lindane)	58-89-9	0.010	µg/L	<0.010	----	----	----	----	
Methoxychlor	72-43-5	0.010	µg/L	<0.010	----	----	----	----	
cis-Chlordane	5103-71-9	0.010	µg/L	<0.010	----	----	----	----	
trans-Chlordane	5103-74-2	0.010	µg/L	<0.010	----	----	----	----	
<sup>^</sup> Total Chlordane (sum)	----	0.010	µg/L	<0.010	----	----	----	----	
Oxychlordane	27304-13-8	0.010	µg/L	<0.010	----	----	----	----	
<b>EP131B: Polychlorinated Biphenyls (as Aroclors)</b>									
Total Polychlorinated biphenyls	----	0.005	µg/L	<0.005	----	----	----	----	
Aroclor 1016	12674-11-2	0.005	µg/L	<0.005	----	----	----	----	
Aroclor 1221	11104-28-2	0.005	µg/L	<0.005	----	----	----	----	
Aroclor 1232	11141-16-5	0.005	µg/L	<0.005	----	----	----	----	
Aroclor 1242	53469-21-9	0.005	µg/L	<0.005	----	----	----	----	
Aroclor 1248	12672-29-6	0.005	µg/L	<0.005	----	----	----	----	
Aroclor 1254	11097-69-1	0.005	µg/L	<0.005	----	----	----	----	
Aroclor 1260	11096-82-5	0.005	µg/L	<0.005	----	----	----	----	
<b>EP132A: Phenolic Compounds</b>									
2-Chlorophenol	95-57-8	0.00005	mg/L	<0.00005	----	----	----	----	
4-Chloro-3-methylphenol	59-50-7	0.00005	mg/L	<0.00005	----	----	----	----	
m-Cresol	108-39-4	0.0001	mg/L	<0.0001	----	----	----	----	
o-Cresol	95-48-7	0.0001	mg/L	<0.0001	----	----	----	----	



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC02	----	----	----	----
Sampling date / time				28-Oct-2025 00:00	----	----	----	----	
Compound	CAS Number	LOR	Unit	EP2518001-001	-----	-----	-----	-----	
				Result	---	---	---	---	
<b>EP132A: Phenolic Compounds - Continued</b>									
p-Cresol	106-44-5	0.0001	mg/L	<0.0001	----	----	----	----	
2,4-Dichlorophenol	120-83-2	0.0001	mg/L	<0.0001	----	----	----	----	
2,6-Dichlorophenol	87-65-0	0.0001	mg/L	<0.0001	----	----	----	----	
2,4-Dimethylphenol	105-67-9	0.0001	mg/L	<0.0001	----	----	----	----	
Hexachlorophene	70-30-4	0.0001	mg/L	<0.0001	----	----	----	----	
2-Nitrophenol	88-75-5	0.0001	mg/L	<0.0001	----	----	----	----	
4-Nitrophenol	100-02-7	0.0001	mg/L	<0.0001	----	----	----	----	
Pentachlorophenol	87-86-5	0.00005	mg/L	<0.00005	----	----	----	----	
Phenol	108-95-2	0.0001	mg/L	<0.0001	----	----	----	----	
2,3,4,6-Tetrachlorophenol	58-90-2	0.0001	mg/L	<0.0001	----	----	----	----	
2,4,5-Trichlorophenol	95-95-4	0.0001	mg/L	<0.0001	----	----	----	----	
2,4,6-Trichlorophenol	88-06-2	0.0001	mg/L	<0.0001	----	----	----	----	
<b>EP132B: Polynuclear Aromatic Hydrocarbons</b>									
Naphthalene	91-20-3	0.02	µg/L	<0.02	----	----	----	----	
Acenaphthylene	208-96-8	0.02	µg/L	<0.02	----	----	----	----	
Acenaphthene	83-32-9	0.02	µg/L	<0.02	----	----	----	----	
Fluorene	86-73-7	0.02	µg/L	<0.02	----	----	----	----	
Phenanthrene	85-01-8	0.02	µg/L	<0.02	----	----	----	----	
Anthracene	120-12-7	0.02	µg/L	<0.02	----	----	----	----	
Fluoranthene	206-44-0	0.02	µg/L	<0.02	----	----	----	----	
Pyrene	129-00-0	0.02	µg/L	<0.02	----	----	----	----	
Benz(a)anthracene	56-55-3	0.02	µg/L	<0.02	----	----	----	----	
Chrysene	218-01-9	0.02	µg/L	<0.02	----	----	----	----	
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.02	µg/L	<0.02	----	----	----	----	
Benzo(k)fluoranthene	207-08-9	0.02	µg/L	<0.02	----	----	----	----	
Benzo(a)pyrene	50-32-8	0.005	µg/L	<0.005	----	----	----	----	
Indeno(1.2.3.cd)pyrene	193-39-5	0.02	µg/L	<0.02	----	----	----	----	



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC02	----	----	----	----
Sampling date / time				28-Oct-2025 00:00	----	----	----	----	
Compound	CAS Number	LOR	Unit	EP2518001-001	-----	-----	-----	-----	
				Result	---	---	---	---	
<b>EP132B: Polynuclear Aromatic Hydrocarbons - Continued</b>									
Dibenz(a,h)anthracene	53-70-3	0.02	µg/L	<0.02	----	----	----	----	
Benzo(g,h,i)perylene	191-24-2	0.02	µg/L	<0.02	----	----	----	----	
^ Total PAH	----	0.005	µg/L	<0.005	----	----	----	----	
^ Benzo(a)pyrene TEQ (zero)	----	0.005	µg/L	<0.005	----	----	----	----	
<b>EP234A: OP Pesticides</b>									
Acephate	30560-19-1	0.5	µg/L	<0.5	----	----	----	----	
Azinphos-methyl	86-50-0	0.02	µg/L	<0.02	----	----	----	----	
Azinphos-ethyl	2642-71-9	0.02	µg/L	<0.02	----	----	----	----	
Bensulide	741-58-2	0.1	µg/L	<0.1	----	----	----	----	
Bromophos-ethyl	4824-78-6	0.10	µg/L	<0.10	----	----	----	----	
Carbofenthoion	786-19-6	0.02	µg/L	<0.02	----	----	----	----	
Chlorfenvinphos	470-90-6	0.02	µg/L	<0.02	----	----	----	----	
Chlorpyrifos	2921-88-2	0.02	µg/L	<0.02	----	----	----	----	
Chlorpyrifos-methyl	5598-13-0	0.2	µg/L	<0.2	----	----	----	----	
Coumaphos	56-72-4	0.01	µg/L	<0.01	----	----	----	----	
Demeton-O	298-03-3	0.02	µg/L	<0.02	----	----	----	----	
Demeton-O & Demeton-S	298-03-3/126-75-0	0.02	µg/L	<0.02	----	----	----	----	
Demeton-S	126-75-0	0.02	µg/L	<0.02	----	----	----	----	
Demeton-S-methyl	919-86-8	0.02	µg/L	<0.02	----	----	----	----	
Diazinon	333-41-5	0.01	µg/L	<0.01	----	----	----	----	
Dichlorvos	62-73-7	0.20	µg/L	<0.20	----	----	----	----	
Dimethoate	60-51-5	0.02	µg/L	<0.02	----	----	----	----	
Disulfoton	298-04-4	0.05	µg/L	<0.05	----	----	----	----	
EPN	2104-64-5	0.05	µg/L	<0.05	----	----	----	----	
Ethion	563-12-2	0.02	µg/L	<0.02	----	----	----	----	
Ethoprophos	13194-48-4	0.01	µg/L	<0.01	----	----	----	----	
Fenamiphos	22224-92-6	0.01	µg/L	<0.01	----	----	----	----	



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC02	----	----	----	----
Sampling date / time				28-Oct-2025 00:00	----	----	----	----	----
Compound	CAS Number	LOR	Unit	EP2518001-001	-----	-----	-----	-----	-----
				Result	---	---	---	---	---
<b>EP234A: OP Pesticides - Continued</b>									
Fenclorphos (Ronnell)	299-84-3	10	µg/L	<10	----	----	----	----	----
Fenitrothion	122-14-5	2	µg/L	<2	----	----	----	----	----
Fensulfothion	115-90-2	0.01	µg/L	<0.01	----	----	----	----	----
Fenthion	55-38-9	0.05	µg/L	<0.05	----	----	----	----	----
Formothion	2540-82-1	20	µg/L	<20	----	----	----	----	----
Fosetyl Aluminium	39148-24-8	10	µg/L	<10	----	----	----	----	----
Malathion	121-75-5	0.02	µg/L	<0.02	----	----	----	----	----
Methidathion	950-37-8	0.1	µg/L	<0.1	----	----	----	----	----
Mevinphos	7786-34-7	0.02	µg/L	<0.02	----	----	----	----	----
Monocrotophos	6923-22-4	0.02	µg/L	<0.02	----	----	----	----	----
Naftalofos	1491-41-4	1.0	µg/L	<1.0	----	----	----	----	----
Omethoate	1113-02-6	0.01	µg/L	<0.01	----	----	----	----	----
Parathion	56-38-2	0.2	µg/L	<0.2	----	----	----	----	----
Parathion-methyl	298-00-0	0.5	µg/L	<0.5	----	----	----	----	----
Phorate	298-02-2	0.1	µg/L	<0.1	----	----	----	----	----
Pirimiphos-ethyl	23505-41-1	0.01	µg/L	<0.01	----	----	----	----	----
Pirimiphos-methyl	29232-93-7	0.01	µg/L	<0.01	----	----	----	----	----
Profenofos	41198-08-7	0.01	µg/L	<0.01	----	----	----	----	----
Prothiofos	34643-46-4	0.1	µg/L	<0.1	----	----	----	----	----
Pyrazophos	13457-18-6	0.1	µg/L	<0.1	----	----	----	----	----
Sulfotep	3689-24-5	0.005	µg/L	<0.005	----	----	----	----	----
Sulprofos	35400-43-2	0.05	µg/L	<0.05	----	----	----	----	----
Temephos	3383-96-8	0.02	µg/L	<0.02	----	----	----	----	----
Terbufos	13071-79-9	0.01	µg/L	<0.01	----	----	----	----	----
Tetrachlorvinphos	22248-79-9	0.01	µg/L	<0.01	----	----	----	----	----
Thiometon	640-15-3	0.5	µg/L	<0.5	----	----	----	----	----
Triazophos	24017-47-8	0.005	µg/L	<0.005	----	----	----	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC02	----	----	----	----
Sampling date / time				28-Oct-2025 00:00	----	----	----	----	
Compound	CAS Number	LOR	Unit	EP2518001-001	-----	-----	-----	-----	
				Result	---	---	---	---	
<b>EP234A: OP Pesticides - Continued</b>									
Trichlorfon	52-68-6	0.02	µg/L	<0.02	----	----	----	----	
Trichloronate	327-98-0	0.5	µg/L	<0.5	----	----	----	----	
<b>EP234H: Triazine Herbicides</b>									
Atrazine	1912-24-9	0.01	µg/L	<0.01	----	----	----	----	
<b>EP074S: VOC Surrogates</b>									
1,2-Dichloroethane-D4	17060-07-0	5	%	96.9	----	----	----	----	
Toluene-D8	2037-26-5	5	%	100	----	----	----	----	
4-Bromofluorobenzene	460-00-4	5	%	96.7	----	----	----	----	
<b>EP080S: TPH(V)/BTEX Surrogates</b>									
1,2-Dichloroethane-D4	17060-07-0	2	%	92.3	----	----	----	----	
Toluene-D8	2037-26-5	2	%	97.9	----	----	----	----	
4-Bromofluorobenzene	460-00-4	2	%	114	----	----	----	----	
<b>EP131S: OC Pesticide Surrogate</b>									
Dibromo-DDE	21655-73-2	0.010	%	97.5	----	----	----	----	
<b>EP131T: PCB Surrogate</b>									
Decachlorobiphenyl	2051-24-3	0.010	%	119	----	----	----	----	
<b>EP132S: Acid Extractable Surrogates</b>									
2-Fluorophenol	367-12-4	0.1	%	52.7	----	----	----	----	
Phenol-d6	13127-88-3	0.1	%	35.2	----	----	----	----	
2-Chlorophenol-D4	93951-73-6	0.1	%	88.7	----	----	----	----	
2,4,6-Tribromophenol	118-79-6	0.1	%	95.1	----	----	----	----	
<b>EP132T: Base/Neutral Extractable Surrogates</b>									
2-Fluorobiphenyl	321-60-8	0.1	%	92.2	----	----	----	----	
Anthracene-d10	1719-06-8	0.1	%	89.1	----	----	----	----	
4-Terphenyl-d14	1718-51-0	0.1	%	96.1	----	----	----	----	
<b>EP132T: Base/Neutral Extractable Surrogates (Low-Level)</b>									
2-Fluorobiphenyl	321-60-8	0.02	%	95.7	----	----	----	----	



**Analytical Results**

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC02	----	----	----	----
				Sampling date / time	28-Oct-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EP2518001-001	-----	-----	-----	-----	-----
				Result	---	---	---	---	---
<b>EP132T: Base/Neutral Extractable Surrogates (Low-Level) - Continued</b>									
<b>Anthracene-d10</b>	1719-06-8	0.02	%	<b>110</b>	----	----	----	----	----
<b>4-Terphenyl-d14</b>	1718-51-0	0.02	%	<b>105</b>	----	----	----	----	----



## Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
<b>EP074S: VOC Surrogates</b>			
1,2-Dichloroethane-D4	17060-07-0	62	134
Toluene-D8	2037-26-5	75	124
4-Bromofluorobenzene	460-00-4	64	118
<b>EP080S: TPH(V)/BTEX Surrogates</b>			
1,2-Dichloroethane-D4	17060-07-0	61	141
Toluene-D8	2037-26-5	73	126
4-Bromofluorobenzene	460-00-4	60	125
<b>EP131S: OC Pesticide Surrogate</b>			
Dibromo-DDE	21655-73-2	14	166
<b>EP131T: PCB Surrogate</b>			
Decachlorobiphenyl	2051-24-3	10	164
<b>EP132S: Acid Extractable Surrogates</b>			
2-Fluorophenol	367-12-4	12	94
Phenol-d6	13127-88-3	10	65
2-Chlorophenol-D4	93951-73-6	37	139
2,4,6-Tribromophenol	118-79-6	35	151
<b>EP132T: Base/Neutral Extractable Surrogates</b>			
2-Fluorobiphenyl	321-60-8	43	135
Anthracene-d10	1719-06-8	48	138
4-Terphenyl-d14	1718-51-0	48	144
<b>EP132T: Base/Neutral Extractable Surrogates (Low-Level)</b>			
2-Fluorobiphenyl	321-60-8	54	136
Anthracene-d10	1719-06-8	66	134
4-Terphenyl-d14	1718-51-0	63	135



### ***Inter-Laboratory Testing***

Analysis conducted by ALS Sydney, NATA accreditation no. 825, site no. 10911 (Chemistry / Biology).

(WATER) EP026SP: Chemical Oxygen Demand (Spectrophotometric)

(WATER) EP132A: Phenolic Compounds

(WATER) EP132S: Acid Extractable Surrogates

(WATER) EP132T: Base/Neutral Extractable Surrogates

(WATER) EP132B: Polynuclear Aromatic Hydrocarbons

(WATER) EP132T: Base/Neutral Extractable Surrogates (Low-Level)

(WATER) EP234A: OP Pesticides

(WATER) EP234H: Triazine Herbicides

(WATER) EP131A: Organochlorine Pesticides

(WATER) EP131S: OC Pesticide Surrogate

(WATER) EP131B: Polychlorinated Biphenyls (as Aroclors)

(WATER) EP131T: PCB Surrogate



## QUALITY CONTROL REPORT

<b>Work Order</b>	<b>: EP2518001</b>	<b>Page</b>	: 1 of 21
<b>Client</b>	<b>: JBS&amp;G AUSTRALIA PTY LTD</b>	<b>Laboratory</b>	: Environmental Division Perth
<b>Contact</b>	: Ben Chainé	<b>Contact</b>	: Rhiannon Steere
<b>Address</b>	: LEVEL 9, 77 ST GEORGES TERRACE PERTH 6000	<b>Address</b>	: 26 Rigali Way Wangara WA Australia 6065
<b>Telephone</b>	: ----	<b>Telephone</b>	: 08 9406 1306
<b>Project</b>	: 701212	<b>Date Samples Received</b>	: 29-Oct-2025
<b>Order number</b>	: 701212	<b>Date Analysis Commenced</b>	: 30-Oct-2025
<b>C-O-C number</b>	: ----	<b>Issue Date</b>	: 07-Nov-2025
<b>Sampler</b>	: B Chainé		
<b>Site</b>	: ----		
<b>Quote number</b>	: EN/000 Custom Quote		
<b>No. of samples received</b>	: 1		
<b>No. of samples analysed</b>	: 1		



This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Canhuang Ke	Inorganics Supervisor	Perth Inorganics, Wangara, WA
Daniel Fisher	Inorganics Analyst	Perth Inorganics, Wangara, WA
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Efua Wilson	Metals Chemist	Perth Inorganics, Wangara, WA
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
John Horwood	Organic Supervisor	Perth Organics, Wangara, WA
Louise Kinkella	Instrument Chemist	Perth Inorganics, Wangara, WA



## General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot

CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

RPD = Relative Percentage Difference

# = Indicates failed QC

\* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

## Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EA015: Total Dissolved Solids dried at 180 ± 5 °C (QC Lot: 6976943)</b>									
EP2518001-001	QC02	EA015: Total Dissolved Solids @180°C	----	1	mg/L	2210	1840	18.5	0% - 20%
<b>ED037P: Alkalinity by PC Titrator (QC Lot: 6971147)</b>									
EP2517901-002	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	320	319	0.0	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	320	319	0.0	0% - 20%
EP2517917-002	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	283	282	0.0	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	283	282	0.0	0% - 20%
<b>ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 6969769)</b>									
EP2518067-039	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	102	90	13.0	0% - 20%
EP2518067-034	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	9	9	0.0	No Limit
<b>ED045G: Chloride by Discrete Analyser (QC Lot: 6969770)</b>									
EP2518067-034	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	694	693	0.0	0% - 20%
<b>ED093F: Dissolved Major Cations (QC Lot: 6972638)</b>									
EP2518062-002	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	53	53	0.0	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	18	18	0.0	0% - 50%
		ED093F: Sodium	7440-23-5	1	mg/L	30	30	0.0	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	8	8	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>ED093F: Dissolved Major Cations (QC Lot: 6972638) - continued</b>									
EP2517703-001	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	53	54	0.0	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	28	28	0.0	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	39	39	0.0	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	9	9	0.0	No Limit
<b>EG020F: Dissolved Metals by ICP-MS (QC Lot: 6972640)</b>									
EP2517983-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.003	0.003	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.013	0.012	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EP2518062-002	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.009	0.008	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
<b>EG020T: Total Metals by ICP-MS (QC Lot: 6977896)</b>									
EP2518001-001	QC02	EG020A-T: Iron	7439-89-6	0.05	mg/L	51.9	51.8	0.3	0% - 20%
EP2518146-001	Anonymous	EG020A-T: Iron	7439-89-6	0.05	mg/L	0.32	0.32	0.0	No Limit
<b>EG035F: Dissolved Mercury by FIMS (QC Lot: 6972639)</b>									
EP2517898-011	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP2518001-001	QC02	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
<b>EK055G: Ammonia as N by Discrete Analyser (QC Lot: 6969783)</b>									
EP2518077-021	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.01	0.01	0.0	No Limit
EP2518077-002	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	1.03	1.04	1.0	0% - 20%
<b>EK057G: Nitrite as N by Discrete Analyser (QC Lot: 6969771)</b>									
EP2518067-039	Anonymous	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EP2518067-034	Anonymous	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	0.04	0.04	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)	
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 6969784)</b>										
EP2518095-001	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	0.02	0.02	0.0	No Limit	
EP2518077-002	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	29.0	29.6	2.1	0% - 20%	
<b>EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QC Lot: 6976267)</b>										
EP2518001-001	QC02	EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.3	0.3	0.0	No Limit	
EP2518092-011	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.8	0.7	0.0	No Limit	
<b>EK067G: Total Phosphorus as P by Discrete Analyser (QC Lot: 6976266)</b>										
EP2518001-001	QC02	EK067G: Total Phosphorus as P	----	0.01	mg/L	<0.01	<0.01	0.0	No Limit	
EP2518092-011	Anonymous	EK067G: Total Phosphorus as P	----	0.01	mg/L	0.04	0.04	0.0	No Limit	
<b>EP005: Total Organic Carbon (TOC) (QC Lot: 6972167)</b>										
EP2518087-001	Anonymous	EP005: Total Organic Carbon	----	1	mg/L	2	2	0.0	No Limit	
EP2518087-004	Anonymous	EP005: Total Organic Carbon	----	1	mg/L	<1	<1	0.0	No Limit	
<b>EP026SP: Chemical Oxygen Demand (Spectrophotometric) (QC Lot: 6973542)</b>										
EN2518559-001	Anonymous	EP026SP: Chemical Oxygen Demand	----	10	mg/L	1730	1750	1.0	0% - 20%	
EP2518018-007	Anonymous	EP026SP: Chemical Oxygen Demand	----	10	mg/L	<10	<10	0.0	0% - 20%	
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 6974382)</b>										
EP2518056-006	Anonymous	EP074: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit	
		EP074: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit	
		EP074: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit	
		EP074: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.0	No Limit	
			106-42-3							
		EP074: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit	
		EP074: Styrene	100-42-5	5	µg/L	<5	<5	0.0	No Limit	
		EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	<5	0.0	No Limit	
		EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	<5	0.0	No Limit	
		EP074: 1,3,5-Trimethylbenzene	108-67-8	5	µg/L	<5	<5	0.0	No Limit	
		EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	<5	0.0	No Limit	
		EP074: 1,2,4-Trimethylbenzene	95-63-6	5	µg/L	<5	<5	0.0	No Limit	
		EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	<5	0.0	No Limit	
		EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	<5	0.0	No Limit	
		EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	<5	0.0	No Limit	
EP2518001-001	QC02	EP074: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit	
		EP074: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit	
		EP074: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit	
		EP074: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.0	No Limit	
			106-42-3							
		EP074: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit	
	100-42-5	5	µg/L	<5	<5	0.0	No Limit			



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 6974382) - continued</b>									
EP2518001-001	QC02	EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.3.5-Trimethylbenzene	108-67-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2.4-Trimethylbenzene	95-63-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	<5	0.0	No Limit
<b>EP074B: Oxygenated Compounds (QC Lot: 6974382)</b>									
EP2518056-006	Anonymous	EP074: Vinyl Acetate	108-05-4	50	µg/L	<50	<50	0.0	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L	<50	<50	0.0	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	50	µg/L	<50	<50	0.0	No Limit
EP2518001-001	QC02	EP074: Vinyl Acetate	108-05-4	50	µg/L	<50	<50	0.0	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L	<50	<50	0.0	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	50	µg/L	<50	<50	0.0	No Limit
<b>EP074C: Sulfonated Compounds (QC Lot: 6974382)</b>									
EP2518056-006	Anonymous	EP074: Carbon disulfide	75-15-0	5	µg/L	<5	<5	0.0	No Limit
EP2518001-001	QC02	EP074: Carbon disulfide	75-15-0	5	µg/L	<5	<5	0.0	No Limit
<b>EP074D: Fumigants (QC Lot: 6974382)</b>									
EP2518056-006	Anonymous	EP074: 2.2-Dichloropropane	594-20-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	0.0	No Limit
EP2518001-001	QC02	EP074: 2.2-Dichloropropane	594-20-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	0.0	No Limit
<b>EP074E: Halogenated Aliphatic Compounds (QC Lot: 6974382)</b>									
EP2518056-006	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Iodomethane	74-88-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	<5	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP074E: Halogenated Aliphatic Compounds (QC Lot: 6974382) - continued</b>									
EP2518056-006	Anonymous	EP074: 1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	5	µg/L	<5	<5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	5	µg/L	<5	<5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	0.0	No Limit
		EP074: Chloromethane	74-87-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	50	µg/L	<50	<50	0.0	No Limit
EP074: Bromomethane	74-83-9	50	µg/L	<50	<50	0.0	No Limit		
EP074: Chloroethane	75-00-3	50	µg/L	<50	<50	0.0	No Limit		
EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	0.0	No Limit		
EP2518001-001	QC02	EP074: 1.1-Dichloroethene	75-35-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Iodomethane	74-88-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	5	µg/L	<5	<5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	5	µg/L	<5	<5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP074E: Halogenated Aliphatic Compounds (QC Lot: 6974382) - continued</b>									
EP2518001-001	QC02	EP074: trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	0.0	No Limit
		EP074: Chloromethane	74-87-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	50	µg/L	<50	<50	0.0	No Limit
		EP074: Bromomethane	74-83-9	50	µg/L	<50	<50	0.0	No Limit
		EP074: Chloroethane	75-00-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	0.0	No Limit
<b>EP074F: Halogenated Aromatic Compounds (QC Lot: 6974382)</b>									
EP2518056-006	Anonymous	EP074: Chlorobenzene	108-90-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: Bromobenzene	108-86-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.3-Dichlorobenzene	541-73-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	5	µg/L	<5	<5	0.0	No Limit
EP2518001-001	QC02	EP074: Chlorobenzene	108-90-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: Bromobenzene	108-86-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.3-Dichlorobenzene	541-73-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	5	µg/L	<5	<5	0.0	No Limit
<b>EP074G: Trihalomethanes (QC Lot: 6974382)</b>									
EP2518056-006	Anonymous	EP074: Chloroform	67-66-3	5	µg/L	30	31	0.0	No Limit
		EP074: Bromodichloromethane	75-27-4	5	µg/L	10	10	0.0	No Limit
		EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: Bromoform	75-25-2	5	µg/L	<5	<5	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP074G: Trihalomethanes (QC Lot: 6974382) - continued</b>									
EP2518001-001	QC02	EP074: Chloroform	67-66-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: Bromoform	75-25-2	5	µg/L	<5	<5	0.0	No Limit
<b>EP074H: Naphthalene (QC Lot: 6974382)</b>									
EP2518056-006	Anonymous	EP074: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
EP2518001-001	QC02	EP074: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
<b>EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6974381)</b>									
EP2518001-001	QC02	EP080: C6 - C9 Fraction	----	20	µg/L	<0.02 mg/L	<20	0.0	No Limit
<b>EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6974403)</b>									
EP2518001-001	QC02	EP071: C15 - C28 Fraction	----	100	µg/L	<0.10 mg/L	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	µg/L	<0.05 mg/L	<50	0.0	No Limit
		EP071: C29 - C36 Fraction	----	50	µg/L	<0.05 mg/L	<50	0.0	No Limit
EP2518102-001	Anonymous	EP071: C15 - C28 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	µg/L	<50	<50	0.0	No Limit
		EP071: C29 - C36 Fraction	----	50	µg/L	<50	<50	0.0	No Limit
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6974381)</b>									
EP2518001-001	QC02	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<0.02 mg/L	<20	0.0	No Limit
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6974403)</b>									
EP2518001-001	QC02	EP071: >C10 - C16 Fraction	----	100	µg/L	<0.10 mg/L	<100	0.0	No Limit
		EP071: >C16 - C34 Fraction	----	100	µg/L	<0.10 mg/L	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	µg/L	<0.10 mg/L	<100	0.0	No Limit
EP2518102-001	Anonymous	EP071: >C10 - C16 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071: >C16 - C34 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
<b>EP080: BTEXN (QC Lot: 6974381)</b>									
EP2518001-001	QC02	EP080: Benzene	71-43-2	1	µg/L	<0.001 mg/L	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<0.002 mg/L	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<0.002 mg/L	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<0.002 mg/L	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<0.002 mg/L	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<0.005 mg/L	<5	0.0	No Limit
<b>EP234A: OP Pesticides (QC Lot: 6973888)</b>									
EP2517997-001	Anonymous	EP234-1: Sulfotep	3689-24-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP234-1: Triazophos	24017-47-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP234-1: Coumaphos	56-72-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP234A: OP Pesticides (QC Lot: 6973888) - continued</b>									
EP2517997-001	Anonymous	EP234-1: Diazinon	333-41-5	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Ethoprophos	13194-48-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Fenamiphos	22224-92-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Fensulfothion	115-90-2	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Omethoate	1113-02-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Pirimiphos-ethyl	23505-41-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Pirimiphos-methyl	29232-93-7	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Profenofos	41198-08-7	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Terbufos	13071-79-9	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Tetrachlorvinphos	22248-79-9	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Azinphos-methyl	86-50-0	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Azinphos-ethyl	2642-71-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Carbofenthion	786-19-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Chlorfenvinphos	470-90-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Chlorpyrifos	2921-88-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Demeton-O	298-03-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Demeton-O & Demeton-S	298-03-3/126-75-0	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Demeton-S	126-75-0	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Demeton-S-methyl	919-86-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Dimethoate	60-51-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Ethion	563-12-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Malathion	121-75-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Mevinphos	7786-34-7	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Monocrotophos	6923-22-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Temephos	3383-96-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Trichlorfon	52-68-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Disulfoton	298-04-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP234-1: EPN	2104-64-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP234-1: Fenthion	55-38-9	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP234-1: Sulprofos	35400-43-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP234-1: Bromophos-ethyl	4824-78-6	0.1	µg/L	<0.10	<0.10	0.0	No Limit
		EP234-1: Phorate	298-02-2	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP234-1: Prothiofos	34643-46-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP234-1: Chlorpyrifos-methyl	5598-13-0	0.2	µg/L	<0.2	<0.2	0.0	No Limit
		EP234-1: Dichlorvos	62-73-7	0.2	µg/L	<0.20	<0.20	0.0	No Limit
		EP234-1: Parathion	56-38-2	0.2	µg/L	<0.2	<0.2	0.0	No Limit
		EP234-1: Parathion-methyl	298-00-0	0.5 (2.0)*	µg/L	<2.0	<2.0	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP234A: OP Pesticides (QC Lot: 6973888) - continued</b>									
EP2517997-001	Anonymous	EP234-1: Trichloronate	327-98-0	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP234-1: Fenchlorphos (Ronnel)	299-84-3	10	µg/L	<10	<10	0.0	No Limit
		EP234-1: Fenitrothion	122-14-5	2	µg/L	<2	<2	0.0	No Limit
<b>EP234A: OP Pesticides (QC Lot: 6973890)</b>									
EP2517997-001	Anonymous	EP234-1x: Bensulide	741-58-2	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP234-1x: Methidathion	950-37-8	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP234-1x: Pyrazophos	13457-18-6	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP234-1x: Acephate	30560-19-1	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP234-1x: Thiometon	640-15-3	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP234-1x: Naftalofos	1491-41-4	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP234-1x: Fosetyl Aluminium	39148-24-8	10	µg/L	<10	<10	0.0	No Limit
EP234-1x: Formothion	2540-82-1	20	µg/L	<20	<20	0.0	No Limit		
<b>EP234H: Triazine Herbicides (QC Lot: 6973888)</b>									
EP2517997-001	Anonymous	EP234-1: Atrazine	1912-24-9	0.01	µg/L	<0.01	<0.01	0.0	No Limit



### Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
						LCS	Low	High
<b>EA015: Total Dissolved Solids dried at 180 ± 5 °C (QCLot: 6976943)</b>								
EA015: Total Dissolved Solids @180°C	----	1	mg/L	<1	2000 mg/L	92.7	80.0	120
				<1	293 mg/L	104	80.0	120
				<1	2470 mg/L	105	80.0	120
<b>ED037P: Alkalinity by PC Titrator (QCLot: 6971147)</b>								
ED037-P: Total Alkalinity as CaCO3	----	----	mg/L	----	20 mg/L	87.9	85.1	126
				----	200 mg/L	96.8	90.5	111
<b>ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6969769)</b>								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L	95.1	89.9	112
				<1	500 mg/L	101	89.9	112
<b>ED045G: Chloride by Discrete Analyser (QCLot: 6969770)</b>								
ED045G: Chloride	16887-00-6	1	mg/L	<1	10 mg/L	99.3	88.6	113
				<1	1000 mg/L	99.0	88.6	113
<b>ED093F: Dissolved Major Cations (QCLot: 6972638)</b>								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	109	86.5	117
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	103	88.4	110
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	101	91.4	113
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	100	84.6	108
<b>EG020F: Dissolved Metals by ICP-MS (QCLot: 6972640)</b>								
EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.5 mg/L	98.8	90.2	111
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	101	90.3	113
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	99.8	89.7	108
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	97.0	87.3	107
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	94.6	88.9	108
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	97.2	89.4	106
EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	94.9	87.6	106
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	97.0	87.2	108
EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	0.1 mg/L	91.6	83.8	102
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	101	89.5	112
<b>EG020T: Total Metals by ICP-MS (QCLot: 6977896)</b>								
EG020A-T: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	95.6	95.0	132



Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
					LCS	Low	High	
<b>EG035F: Dissolved Mercury by FIMS (QCLot: 6972639)</b>								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.005 mg/L	98.2	85.6	120
<b>EK055G: Ammonia as N by Discrete Analyser (QCLot: 6969783)</b>								
EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	1 mg/L	102	86.2	111
<b>EK057G: Nitrite as N by Discrete Analyser (QCLot: 6969771)</b>								
EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.5 mg/L	106	88.7	113
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 6969784)</b>								
EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.5 mg/L	104	90.5	110
<b>EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 6976267)</b>								
EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	<0.1	10 mg/L	94.6	80.0	115
<b>EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 6976266)</b>								
EK067G: Total Phosphorus as P	----	0.01	mg/L	<0.01	4.42 mg/L	86.1	70.0	110
<b>EP005: Total Organic Carbon (TOC) (QCLot: 6972167)</b>								
EP005: Total Organic Carbon	----	1	mg/L	<1	10 mg/L	103	87.2	116
				<1	100 mg/L	104	87.2	116
<b>EP026SP: Chemical Oxygen Demand (Spectrophotometric) (QCLot: 6973542)</b>								
EP026SP: Chemical Oxygen Demand	----	10	mg/L	<10	50 mg/L	100	82.0	112
				<10	500 mg/L	105	83.0	113
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 6974382)</b>								
EP074: Benzene	71-43-2	1	µg/L	<1	10 µg/L	97.9	86.8	112
EP074: Toluene	108-88-3	2	µg/L	<2	10 µg/L	98.3	87.0	111
EP074: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	97.1	86.5	112
EP074: meta- & para-Xylene	108-38-3	2	µg/L	<2	20 µg/L	96.9	84.5	113
	106-42-3							
EP074: Styrene	100-42-5	5	µg/L	<5	10 µg/L	89.0	80.0	118
EP074: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	101	88.1	110
EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	10 µg/L	97.0	86.6	113
EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	10 µg/L	92.1	78.3	120
EP074: 1,3,5-Trimethylbenzene	108-67-8	5	µg/L	<5	10 µg/L	92.8	84.2	114
EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	10 µg/L	92.1	82.3	117
EP074: 1,2,4-Trimethylbenzene	95-63-6	5	µg/L	<5	10 µg/L	87.1	83.0	116
EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	10 µg/L	93.1	83.9	115
EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	10 µg/L	88.2	80.3	120
EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	10 µg/L	85.5	77.5	122
<b>EP074B: Oxygenated Compounds (QCLot: 6974382)</b>								



Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
					LCS	Low	High	
<b>EP074B: Oxygenated Compounds (QCLot: 6974382) - continued</b>								
EP074: Vinyl Acetate	108-05-4	50	µg/L	<50	100 µg/L	86.0	78.7	121
EP074: 2-Butanone (MEK)	78-93-3	50	µg/L	<50	100 µg/L	90.7	64.0	142
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L	<50	100 µg/L	85.0	73.8	126
EP074: 2-Hexanone (MBK)	591-78-6	50	µg/L	<50	100 µg/L	88.8	62.7	142
<b>EP074C: Sulfonated Compounds (QCLot: 6974382)</b>								
EP074: Carbon disulfide	75-15-0	5	µg/L	<5	10 µg/L	91.8	77.5	123
<b>EP074D: Fumigants (QCLot: 6974382)</b>								
EP074: 2,2-Dichloropropane	594-20-7	5	µg/L	<5	10 µg/L	82.1	77.0	123
EP074: 1,2-Dichloropropane	78-87-5	5	µg/L	<5	10 µg/L	89.0	85.9	113
EP074: cis-1,3-Dichloropropylene	10061-01-5	5	µg/L	<5	10 µg/L	86.4	84.4	115
EP074: trans-1,3-Dichloropropylene	10061-02-6	5	µg/L	<5	10 µg/L	83.5	79.9	119
EP074: 1,2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	10 µg/L	83.5	82.8	116
<b>EP074E: Halogenated Aliphatic Compounds (QCLot: 6974382)</b>								
EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	100 µg/L	106	74.3	125
EP074: Chloromethane	74-87-3	50	µg/L	<50	100 µg/L	104	76.8	123
EP074: Vinyl chloride	75-01-4	50	µg/L	<50	100 µg/L	87.5	70.8	128
EP074: Bromomethane	74-83-9	50	µg/L	<50	100 µg/L	107	77.4	125
EP074: Chloroethane	75-00-3	50	µg/L	<50	100 µg/L	108	77.6	121
EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	100 µg/L	95.9	79.8	120
EP074: 1,1-Dichloroethene	75-35-4	5	µg/L	<5	10 µg/L	91.5	80.0	118
EP074: Iodomethane	74-88-4	5	µg/L	<5	10 µg/L	83.1	62.8	129
EP074: trans-1,2-Dichloroethene	156-60-5	5	µg/L	<5	10 µg/L	91.5	83.6	115
EP074: 1,1-Dichloroethane	75-34-3	5	µg/L	<5	10 µg/L	89.2	83.7	116
EP074: cis-1,2-Dichloroethene	156-59-2	5	µg/L	<5	10 µg/L	93.2	83.6	115
EP074: 1,1,1-Trichloroethane	71-55-6	5	µg/L	<5	10 µg/L	87.9	84.5	116
EP074: 1,1-Dichloropropylene	563-58-6	5	µg/L	<5	10 µg/L	90.4	85.4	113
EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	10 µg/L	87.1	82.4	119
EP074: 1,2-Dichloroethane	107-06-2	5	µg/L	<5	10 µg/L	88.1	77.3	121
EP074: Trichloroethene	79-01-6	5	µg/L	<5	10 µg/L	90.8	86.4	112
EP074: Dibromomethane	74-95-3	5	µg/L	<5	10 µg/L	88.1	77.6	122
EP074: 1,1,2-Trichloroethane	79-00-5	5	µg/L	<5	10 µg/L	91.4	83.4	116
EP074: 1,3-Dichloropropane	142-28-9	5	µg/L	<5	10 µg/L	95.7	83.8	114
EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	10 µg/L	98.3	78.9	121
EP074: 1,1,1,2-Tetrachloroethane	630-20-6	5	µg/L	<5	10 µg/L	79.7	70.0	130



Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
						LCS	Low	High
<b>EP074E: Halogenated Aliphatic Compounds (QCLot: 6974382) - continued</b>								
EP074: trans-1,4-Dichloro-2-butene	110-57-6	5	µg/L	<5	10 µg/L	81.2	76.1	126
EP074: cis-1,4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	10 µg/L	81.5	75.4	127
EP074: 1,1,2,2-Tetrachloroethane	79-34-5	5	µg/L	<5	10 µg/L	92.9	72.3	125
EP074: 1,2,3-Trichloropropane	96-18-4	5	µg/L	<5	10 µg/L	90.0	79.8	121
EP074: Pentachloroethane	76-01-7	5	µg/L	<5	10 µg/L	86.2	67.7	133
EP074: 1,2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	10 µg/L	91.6	71.8	130
EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	10 µg/L	83.5	70.6	131
<b>EP074F: Halogenated Aromatic Compounds (QCLot: 6974382)</b>								
EP074: Chlorobenzene	108-90-7	5	µg/L	<5	10 µg/L	97.7	89.8	110
EP074: Bromobenzene	108-86-1	5	µg/L	<5	10 µg/L	94.5	88.4	111
EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	10 µg/L	94.0	76.4	120
EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	10 µg/L	90.5	84.2	115
EP074: 1,3-Dichlorobenzene	541-73-1	5	µg/L	<5	10 µg/L	91.1	82.1	117
EP074: 1,4-Dichlorobenzene	106-46-7	5	µg/L	<5	10 µg/L	92.6	88.4	112
EP074: 1,2-Dichlorobenzene	95-50-1	5	µg/L	<5	10 µg/L	93.3	90.1	110
EP074: 1,2,4-Trichlorobenzene	120-82-1	5	µg/L	<5	10 µg/L	94.2	75.6	125
EP074: 1,2,3-Trichlorobenzene	87-61-6	5	µg/L	<5	10 µg/L	95.9	84.6	116
<b>EP074G: Trihalomethanes (QCLot: 6974382)</b>								
EP074: Chloroform	67-66-3	5	µg/L	<5	10 µg/L	95.2	83.0	116
EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	10 µg/L	83.1	79.2	121
EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	10 µg/L	82.7	77.8	123
EP074: Bromoform	75-25-2	5	µg/L	<5	10 µg/L	77.4	75.5	125
<b>EP074H: Naphthalene (QCLot: 6974382)</b>								
EP074: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	98.4	73.9	111
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 6974381)</b>								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	360 µg/L	97.5	73.6	113
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 6974403)</b>								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	4771 µg/L	103	39.3	103
EP071: C15 - C28 Fraction	----	100	µg/L	<100	8513 µg/L	115	47.2	122
EP071: C29 - C36 Fraction	----	50	µg/L	<50	1510 µg/L	114	42.5	119
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6974381)</b>								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	450 µg/L	97.5	73.9	115
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6974403)</b>								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	6540 µg/L	99.4	47.0	100



Sub-Matrix: WATER

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike	Spike Recovery (%)		Acceptable Limits (%)	
					Concentration	LCS	Low	High	
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6974403) - continued</b>									
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	7770 µg/L	114	46.2	116	
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	473 µg/L	118	24.7	137	
<b>EP080: BTEXN (QCLot: 6974381)</b>									
EP080: Benzene	71-43-2	1	µg/L	<1	20 µg/L	98.0	84.1	114	
EP080: Toluene	108-88-3	2	µg/L	<2	20 µg/L	94.0	81.0	115	
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	20 µg/L	94.7	84.4	113	
EP080: meta- & para-Xylene	108-38-3	2	µg/L	<2	40 µg/L	98.5	84.3	114	
	106-42-3								
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	20 µg/L	98.5	86.5	111	
EP080: Naphthalene	91-20-3	5	µg/L	<5	5 µg/L	92.1	77.0	118	
<b>EP131A: Organochlorine Pesticides (QCLot: 6974697)</b>									
EP131A: Aldrin	309-00-2	0.01	µg/L	<0.010	1.1 µg/L	108	34.0	145	
EP131A: alpha-BHC	319-84-6	0.01	µg/L	<0.010	1.1 µg/L	116	27.2	131	
EP131A: beta-BHC	319-85-7	0.01	µg/L	<0.010	1.1 µg/L	106	28.6	133	
EP131A: delta-BHC	319-86-8	0.01	µg/L	<0.010	1.1 µg/L	106	36.0	131	
EP131A: 4,4'-DDD	72-54-8	0.01	µg/L	<0.010	1.1 µg/L	104	36.0	142	
EP131A: 4,4'-DDE	72-55-9	0.01	µg/L	<0.010	1.1 µg/L	105	30.4	112	
EP131A: 4,4'-DDT	50-29-3	0.01	µg/L	<0.010	1.1 µg/L	111	29.5	142	
EP131A: Dieldrin	60-57-1	0.01	µg/L	<0.010	1.1 µg/L	113	28.1	122	
EP131A: alpha-Endosulfan	959-98-8	0.01	µg/L	<0.010	1.1 µg/L	114	34.0	119	
EP131A: beta-Endosulfan	33213-65-9	0.01	µg/L	<0.010	1.1 µg/L	107	31.6	128	
EP131A: Endosulfan sulfate	1031-07-8	0.01	µg/L	<0.010	1.1 µg/L	70.3	35.0	159	
EP131A: Endrin	72-20-8	0.01	µg/L	<0.010	1.1 µg/L	105	21.5	165	
EP131A: Endosulfan (sum)	115-29-7	0.01	µg/L	<0.010	----	----	----	----	
EP131A: Endrin aldehyde	7421-93-4	0.01	µg/L	<0.010	1.1 µg/L	110	22.7	123	
EP131A: Endrin ketone	53494-70-5	0.01	µg/L	<0.010	1.1 µg/L	114	16.3	144	
EP131A: Heptachlor	76-44-8	0.005	µg/L	<0.005	1.1 µg/L	116	33.0	160	
EP131A: Heptachlor epoxide	1024-57-3	0.01	µg/L	<0.010	1.1 µg/L	103	33.0	117	
EP131A: Hexachlorobenzene (HCB)	118-74-1	0.01	µg/L	<0.010	1.1 µg/L	95.0	23.6	126	
EP131A: gamma-BHC - (Lindane)	58-89-9	0.01	µg/L	<0.010	1.1 µg/L	114	28.7	134	
EP131A: Methoxychlor	72-43-5	0.01	µg/L	<0.010	1.1 µg/L	81.7	29.5	150	
EP131A: cis-Chlordane	5103-71-9	0.01	µg/L	<0.010	1.1 µg/L	107	27.0	116	
EP131A: trans-Chlordane	5103-74-2	0.01	µg/L	<0.010	1.1 µg/L	110	31.2	119	
EP131A: Total Chlordane (sum)	----	0.01	µg/L	<0.010	----	----	----	----	



Sub-Matrix: WATER

Method: Compound				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)
CAS Number	LOR	Unit	Result	LCS		Low	High	
<b>EP131A: Organochlorine Pesticides (QCLot: 6974697) - continued</b>								
EP131A: Sum of DDD + DDE + DDT	72-54-8/72-5 5-9/50-2	0.01	µg/L	<0.010	----	----	----	----
<b>EP131B: Polychlorinated Biphenyls (as Aroclors) (QCLot: 6974698)</b>								
EP131B-ST: Aroclor 1254	11097-69-1	0.005	µg/L	<0.005	0.00022 µg/L	84.0	61.6	123
<b>EP132A: Phenolic Compounds (QCLot: 6974695)</b>								
EP132: 2-Chlorophenol	95-57-8	0.05	µg/L	<0.05	2 µg/L	92.9	61.0	125
EP132: 4-Chloro-3-methylphenol	59-50-7	0.05	µg/L	<0.05	2 µg/L	84.4	61.0	125
EP132: m-Cresol	108-39-4	0.1	µg/L	<0.1	2 µg/L	65.0	42.0	118
EP132: o-Cresol	95-48-7	0.1	µg/L	<0.1	2 µg/L	68.5	50.0	122
EP132: p-Cresol	106-44-5	0.1	µg/L	<0.1	2 µg/L	66.7	38.0	124
EP132: 2,4-Dichlorophenol	120-83-2	0.1	µg/L	<0.1	2 µg/L	88.2	64.0	128
EP132: 2,6-Dichlorophenol	87-65-0	0.1	µg/L	<0.1	2 µg/L	87.3	63.0	127
EP132: 2,4-Dimethylphenol	105-67-9	0.1	µg/L	<0.1	2 µg/L	# 37.3	55.0	131
EP132: Hexachlorophene	70-30-4	0.1	µg/L	<0.1	2 µg/L	74.3	34.0	138
EP132: 2-Nitrophenol	88-75-5	0.1	µg/L	<0.1	2 µg/L	75.8	50.0	154
EP132: 4-Nitrophenol	100-02-7	0.1	µg/L	<0.1	2 µg/L	54.6	22.0	142
EP132: Pentachlorophenol	87-86-5	0.05	µg/L	<0.05	2 µg/L	87.0	32.0	138
EP132: Phenol	108-95-2	0.1	µg/L	<0.1	2 µg/L	45.8	25.6	74.0
EP132: 2,3,4,6-Tetrachlorophenol	58-90-2	0.1	µg/L	<0.1	2 µg/L	86.5	52.0	132
EP132: 2,4,5-Trichlorophenol	95-95-4	0.1	µg/L	<0.1	2 µg/L	86.6	68.0	130
EP132: 2,4,6-Trichlorophenol	88-06-2	0.1	µg/L	<0.1	2 µg/L	83.5	63.0	129
<b>EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 6974694)</b>								
EP132-LL: Naphthalene	91-20-3	0.02	µg/L	<0.02	0.25 µg/L	86.1	62.0	136
EP132-LL: Acenaphthylene	208-96-8	0.02	µg/L	<0.02	0.25 µg/L	93.9	68.0	128
EP132-LL: Acenaphthene	83-32-9	0.02	µg/L	<0.02	0.25 µg/L	89.5	69.0	121
EP132-LL: Fluorene	86-73-7	0.02	µg/L	<0.02	0.25 µg/L	88.6	69.0	131
EP132-LL: Phenanthrene	85-01-8	0.02	µg/L	<0.02	0.25 µg/L	94.2	69.0	137
EP132-LL: Anthracene	120-12-7	0.02	µg/L	<0.02	0.25 µg/L	93.9	64.0	120
EP132-LL: Fluoranthene	206-44-0	0.02	µg/L	<0.02	0.25 µg/L	94.6	63.0	129
EP132-LL: Pyrene	129-00-0	0.02	µg/L	<0.02	0.25 µg/L	88.4	67.0	127
EP132-LL: Benz(a)anthracene	56-55-3	0.02	µg/L	<0.02	0.25 µg/L	88.8	72.0	132
EP132-LL: Chrysene	218-01-9	0.02	µg/L	<0.02	0.25 µg/L	97.3	65.0	125
EP132-LL: Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.02	µg/L	<0.02	0.25 µg/L	90.5	66.0	130
EP132-LL: Benzo(k)fluoranthene	207-08-9	0.02	µg/L	<0.02	0.25 µg/L	89.0	64.0	130



Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike	Spike Recovery (%)		Acceptable Limits (%)	
					Concentration	LCS	Low	High	
<b>EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 6974694) - continued</b>									
EP132-LL: Benzo(a)pyrene	50-32-8	0.005	µg/L	<0.005	0.25 µg/L	89.5	61.0	125	
EP132-LL: Indeno(1.2.3.cd)pyrene	193-39-5	0.02	µg/L	<0.02	0.25 µg/L	86.4	67.0	131	
EP132-LL: Dibenz(a,h)anthracene	53-70-3	0.02	µg/L	<0.02	0.25 µg/L	85.3	67.0	135	
EP132-LL: Benzo(g,h,i)perylene	191-24-2	0.02	µg/L	<0.02	0.25 µg/L	87.4	66.0	130	
EP132-LL: Total PAH	----	0.005	µg/L	<0.005	----	----	----	----	
<b>EP234A: OP Pesticides (QCLot: 6973888)</b>									
EP234-1: Azinphos-methyl	86-50-0	0.02	µg/L	<0.02	0.2 µg/L	79.6	77.0	129	
EP234-1: Azinphos-ethyl	2642-71-9	0.02	µg/L	<0.02	0.2 µg/L	88.7	75.0	135	
EP234-1: Bromophos-ethyl	4824-78-6	0.1	µg/L	<0.10	1 µg/L	99.7	70.0	130	
EP234-1: Carbofenthion	786-19-6	0.02	µg/L	<0.02	0.2 µg/L	90.6	70.0	130	
EP234-1: Chlorfenvinphos	470-90-6	0.02	µg/L	<0.02	0.2 µg/L	84.5	74.0	134	
EP234-1: Chlorpyrifos	2921-88-2	0.02	µg/L	<0.02	0.2 µg/L	105	70.0	130	
EP234-1: Chlorpyrifos-methyl	5598-13-0	0.2	µg/L	<0.2	2 µg/L	97.0	70.0	130	
EP234-1: Coumaphos	56-72-4	0.01	µg/L	<0.01	0.1 µg/L	88.2	70.0	130	
EP234-1: Demeton-O	298-03-3	0.02	µg/L	<0.02	0.05 µg/L	103	64.0	134	
EP234-1: Demeton-O & Demeton-S	298-03-3/12 6-75-0	0.02	µg/L	<0.02	0.1 µg/L	97.8	79.0	127	
EP234-1: Demeton-S	126-75-0	0.02	µg/L	<0.02	0.05 µg/L	92.8	63.0	135	
EP234-1: Demeton-S-methyl	919-86-8	0.02	µg/L	<0.02	0.2 µg/L	107	70.0	128	
EP234-1: Diazinon	333-41-5	0.01	µg/L	<0.01	0.1 µg/L	99.3	68.0	138	
EP234-1: Dichlorvos	62-73-7	0.2	µg/L	<0.20	2 µg/L	105	76.0	128	
EP234-1: Dimethoate	60-51-5	0.02	µg/L	<0.02	0.2 µg/L	96.4	75.0	127	
EP234-1: Disulfoton	298-04-4	0.05	µg/L	<0.05	0.5 µg/L	107	72.0	134	
EP234-1: EPN	2104-64-5	0.05	µg/L	<0.05	0.5 µg/L	100	70.0	130	
EP234-1: Ethion	563-12-2	0.02	µg/L	<0.02	0.2 µg/L	94.6	70.0	130	
EP234-1: Ethoprophos	13194-48-4	0.01	µg/L	<0.01	0.1 µg/L	92.6	78.0	128	
EP234-1: Fenamiphos	22224-92-6	0.01	µg/L	<0.01	0.1 µg/L	77.6	71.0	135	
EP234-1: Fenchlorphos (Ronnel)	299-84-3	10	µg/L	<10	100 µg/L	101	70.0	130	
EP234-1: Fenitrothion	122-14-5	2	µg/L	<2	20 µg/L	86.4	64.0	136	
EP234-1: Fensulfothion	115-90-2	0.01	µg/L	<0.01	0.1 µg/L	97.0	79.0	125	
EP234-1: Fenthion	55-38-9	0.05	µg/L	<0.05	0.5 µg/L	96.5	70.0	130	
EP234-1: Malathion	121-75-5	0.02	µg/L	<0.02	0.2 µg/L	96.4	70.0	130	
EP234-1: Mevinphos	7786-34-7	0.02	µg/L	<0.02	0.2 µg/L	99.0	77.0	123	
EP234-1: Monocrotophos	6923-22-4	0.02	µg/L	<0.02	0.2 µg/L	100	75.0	129	
EP234-1: Omethoate	1113-02-6	0.01	µg/L	<0.01	0.1 µg/L	99.1	74.0	130	





Sub-Matrix: WATER

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6969769) - continued</b>							
EP2518001-001	QC02	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	100 mg/L	106	70.4	130
<b>ED045G: Chloride by Discrete Analyser (QCLot: 6969770)</b>							
EP2518001-001	QC02	ED045G: Chloride	16887-00-6	200 mg/L	# Not Determined	70.0	130
<b>EG020F: Dissolved Metals by ICP-MS (QCLot: 6972640)</b>							
EP2517997-001	Anonymous	EG020A-F: Arsenic	7440-38-2	0.2 mg/L	123	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.05 mg/L	120	70.0	130
		EG020A-F: Chromium	7440-47-3	0.2 mg/L	114	70.0	130
		EG020A-F: Copper	7440-50-8	0.2 mg/L	118	70.0	130
		EG020A-F: Lead	7439-92-1	0.2 mg/L	116	70.0	130
		EG020A-F: Manganese	7439-96-5	0.2 mg/L	115	70.0	130
		EG020A-F: Nickel	7440-02-0	0.2 mg/L	119	70.0	130
		EG020A-F: Zinc	7440-66-6	0.2 mg/L	124	70.0	130
<b>EG035F: Dissolved Mercury by FIMS (QCLot: 6972639)</b>							
EP2517979-001	Anonymous	EG035F: Mercury	7439-97-6	0.005 mg/L	99.1	70.0	130
<b>EK055G: Ammonia as N by Discrete Analyser (QCLot: 6969783)</b>							
EP2518077-014	Anonymous	EK055G: Ammonia as N	7664-41-7	1 mg/L	100	70.0	130
<b>EK057G: Nitrite as N by Discrete Analyser (QCLot: 6969771)</b>							
EP2518001-001	QC02	EK057G: Nitrite as N	14797-65-0	0.5 mg/L	114	70.0	130
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 6969784)</b>							
EP2518077-014	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.5 mg/L	94.3	70.0	130
<b>EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 6976267)</b>							
EP2518092-001	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	----	5 mg/L	101	70.0	130
<b>EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 6976266)</b>							
EP2518092-001	Anonymous	EK067G: Total Phosphorus as P	----	1 mg/L	93.7	70.0	130
<b>EP005: Total Organic Carbon (TOC) (QCLot: 6972167)</b>							
EP2518087-002	Anonymous	EP005: Total Organic Carbon	----	100 mg/L	102	70.0	130
<b>EP026SP: Chemical Oxygen Demand (Spectrophotometric) (QCLot: 6973542)</b>							
EN2518559-001	Anonymous	EP026SP: Chemical Oxygen Demand	----	2910 mg/L	111	70.0	130
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 6974382)</b>							
EP2518146-001	Anonymous	EP074: Benzene	71-43-2	20 µg/L	98.0	82.7	115
		EP074: Toluene	108-88-3	20 µg/L	94.9	77.1	118
<b>EP074E: Halogenated Aliphatic Compounds (QCLot: 6974382)</b>							
EP2518146-001	Anonymous	EP074: 1,1-Dichloroethene	75-35-4	20 µg/L	94.4	73.7	126
		EP074: Trichloroethene	79-01-6	20 µg/L	90.8	79.1	120



Sub-Matrix: WATER

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EP074F: Halogenated Aromatic Compounds (QCLot: 6974382)</b>							
EP2518146-001	Anonymous	EP074: Chlorobenzene	108-90-7	20 µg/L	94.9	81.4	115
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 6974381)</b>							
EP2518146-001	Anonymous	EP080: C6 - C9 Fraction	----	240 µg/L	102	77.0	137
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 6974403)</b>							
EP2518001-001	QC02	EP071: C10 - C14 Fraction	----	4771 µg/L	80.8	44.5	122
		EP071: C15 - C28 Fraction	----	8513 µg/L	90.2	55.1	143
		EP071: C29 - C36 Fraction	----	1510 µg/L	89.9	53.6	128
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6974381)</b>							
EP2518146-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	290 µg/L	98.1	77.0	137
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6974403)</b>							
EP2518001-001	QC02	EP071: >C10 - C16 Fraction	----	6540 µg/L	85.2	44.5	122
		EP071: >C16 - C34 Fraction	----	7770 µg/L	89.8	55.1	143
		EP071: >C34 - C40 Fraction	----	473 µg/L	93.1	53.6	128
<b>EP080: BTEXN (QCLot: 6974381)</b>							
EP2518146-001	Anonymous	EP080: Benzene	71-43-2	20 µg/L	101	77.0	122
		EP080: Toluene	108-88-3	20 µg/L	107	73.5	126
<b>EP234A: OP Pesticides (QCLot: 6973888)</b>							
EP2517997-001	Anonymous	EP234-1: Azinphos-methyl	86-50-0	0.2 µg/L	105	70.0	130
		EP234-1: Azinphos-ethyl	2642-71-9	0.2 µg/L	103	70.0	130
		EP234-1: Bromophos-ethyl	4824-78-6	1 µg/L	# 56.7	70.0	130
		EP234-1: Carbofenthoion	786-19-6	0.2 µg/L	104	70.0	130
		EP234-1: Chlorfenvinphos	470-90-6	0.2 µg/L	88.1	70.0	130
		EP234-1: Chlorpyrifos	2921-88-2	0.2 µg/L	86.0	70.0	130
		EP234-1: Chlorpyrifos-methyl	5598-13-0	2 µg/L	85.6	58.0	136
		EP234-1: Coumaphos	56-72-4	0.1 µg/L	91.1	70.0	130
		EP234-1: Demeton-O	298-03-3	0.05 µg/L	95.0	70.0	130
		EP234-1: Demeton-O & Demeton-S	298-03-3/126-75-0	0.1 µg/L	93.9	69.0	129
		EP234-1: Demeton-S	126-75-0	0.05 µg/L	92.8	70.0	130
		EP234-1: Demeton-S-methyl	919-86-8	0.2 µg/L	102	70.0	130
		EP234-1: Diazinon	333-41-5	0.1 µg/L	75.4	70.0	130
		EP234-1: Dichlorvos	62-73-7	2 µg/L	110	70.0	130
		EP234-1: Dimethoate	60-51-5	0.2 µg/L	74.2	69.0	131
		EP234-1: Disulfoton	298-04-4	0.5 µg/L	107	70.0	130
		EP234-1: EPN	2104-64-5	0.5 µg/L	74.4	70.0	130
		EP234-1: Ethion	563-12-2	0.2 µg/L	102	70.0	130
		EP234-1: Ethoprophos	13194-48-4	0.1 µg/L	94.4	70.0	132



Sub-Matrix: WATER

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EP234A: OP Pesticides (QCLot: 6973888) - continued</b>							
EP2517997-001	Anonymous	EP234-1: Fenamiphos	22224-92-6	0.1 µg/L	95.8	70.0	130
		EP234-1: Fenchlorphos (Ronnel)	299-84-3	100 µg/L	81.6	71.0	133
		EP234-1: Fenitrothion	122-14-5	20 µg/L	70.7	64.0	136
		EP234-1: Fensulfthion	115-90-2	0.1 µg/L	86.6	83.0	123
		EP234-1: Fenthion	55-38-9	0.5 µg/L	104	70.0	130
		EP234-1: Malathion	121-75-5	0.2 µg/L	110	70.0	130
		EP234-1: Mevinphos	7786-34-7	0.2 µg/L	92.8	69.0	125
		EP234-1: Monocrotophos	6923-22-4	0.2 µg/L	# 33.4	70.0	128
		EP234-1: Omethoate	1113-02-6	0.1 µg/L	104	70.0	130
		EP234-1: Parathion	56-38-2	2 µg/L	# 69.6	70.0	130
		EP234-1: Parathion-methyl	298-00-0	20 µg/L	74.5	70.0	140
		EP234-1: Phorate	298-02-2	1 µg/L	78.5	70.0	130
		EP234-1: Pirimiphos-ethyl	23505-41-1	0.1 µg/L	95.5	70.0	130
		EP234-1: Pirimiphos-methyl	29232-93-7	0.1 µg/L	79.2	70.0	130
		EP234-1: Profenofos	41198-08-7	0.1 µg/L	90.8	70.0	130
		EP234-1: Prothiofos	34643-46-4	1 µg/L	# 54.6	70.0	130
		EP234-1: Sulfotep	3689-24-5	0.05 µg/L	106	63.0	135
		EP234-1: Sulprofos	35400-43-2	0.5 µg/L	97.2	70.0	130
		EP234-1: Temephos	3383-96-8	0.2 µg/L	121	70.0	130
		EP234-1: Terbufos	13071-79-9	0.1 µg/L	107	70.0	130
		EP234-1: Tetrachlorvinphos	22248-79-9	0.1 µg/L	107	77.0	125
EP234-1: Triazophos	24017-47-8	0.05 µg/L	84.0	74.0	132		
EP234-1: Trichlorfon	52-68-6	0.2 µg/L	# 60.1	70.0	130		
EP234-1: Trichloronate	327-98-0	5 µg/L	70.4	63.0	139		
<b>EP234A: OP Pesticides (QCLot: 6973890)</b>							
EP2517997-001	Anonymous	EP234-1x: Acephate	30560-19-1	2.5 µg/L	93.8	70.0	130
		EP234-1x: Bensulide	741-58-2	2.5 µg/L	104	70.0	130
		EP234-1x: Fosetyl Aluminium	39148-24-8	2.5 µg/L	# 3.2	70.0	130
		EP234-1x: Methidathion	950-37-8	2.5 µg/L	103	70.0	130
		EP234-1x: Naftalofos	1491-41-4	2.5 µg/L	104	70.0	130
		EP234-1x: Pyrazophos	13457-18-6	2.5 µg/L	74.8	70.0	130
		EP234-1x: Thiometon	640-15-3	2.5 µg/L	96.3	70.0	130
<b>EP234H: Triazine Herbicides (QCLot: 6973888)</b>							
EP2517997-001	Anonymous	EP234-1: Atrazine	1912-24-9	0.1 µg/L	78.2	68.0	130



## QA/QC Compliance Assessment to assist with Quality Review

Work Order	: EP2518001	Page	: 1 of 11
Client	: JBS&G AUSTRALIA PTY LTD	Laboratory	: Environmental Division Perth
Contact	: Ben Chaine	Telephone	: 08 9406 1306
Project	: 701212	Date Samples Received	: 29-Oct-2025
Site	: ----	Issue Date	: 07-Nov-2025
Sampler	: B Chaine	No. of samples received	: 1
Order number	: 701212	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

### Summary of Outliers

#### Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- Laboratory Control outliers exist - please see following pages for full details.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

#### Outliers : Analysis Holding Time Compliance

- Analysis Holding Time Outliers exist - please see following pages for full details.

#### Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers exist - please see following pages for full details.



### Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: WATER

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
<b>Laboratory Control Spike (LCS) Recoveries</b>							
EP132A: Phenolic Compounds	QC-MRG2-69746940	----	2,4-Dimethylphenol	105-67-9	37.3 %	55.0-131%	Recovery less than lower control limit
<b>Matrix Spike (MS) Recoveries</b>							
ED045G: Chloride by Discrete Analyser	EP2518001--001	QC02	Chloride	16887-00-6	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP234A: OP Pesticides	EP2517997--001	Anonymous	Bromophos-ethyl	4824-78-6	56.7 %	70.0-130%	Recovery less than lower data quality objective
EP234A: OP Pesticides	EP2517997--001	Anonymous	Monocrotophos	6923-22-4	33.4 %	70.0-128%	Recovery less than lower data quality objective
EP234A: OP Pesticides	EP2517997--001	Anonymous	Parathion	56-38-2	69.6 %	70.0-130%	Recovery less than lower data quality objective
EP234A: OP Pesticides	EP2517997--001	Anonymous	Prothiofos	34643-46-4	54.6 %	70.0-130%	Recovery less than lower data quality objective
EP234A: OP Pesticides	EP2517997--001	Anonymous	Trichlorfon	52-68-6	60.1 %	70.0-130%	Recovery less than lower data quality objective
EP234A: OP Pesticides	EP2517997--001	Anonymous	Fosetyl Aluminium	39148-24-8	3.2 %	70.0-130%	Recovery less than lower data quality objective

### Outliers : Analysis Holding Time Compliance

Matrix: WATER

Method	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
<b>EK057G: Nitrite as N by Discrete Analyser</b>						
Clear Plastic Bottle - Natural QC02	----	----	----	31-Oct-2025	30-Oct-2025	1

### Outliers : Frequency of Quality Control Samples

Matrix: WATER

Quality Control Sample Type	Method	Count		Rate (%)		Quality Control Specification
		QC	Regular	Actual	Expected	
<b>Laboratory Duplicates (DUP)</b>						
Organochlorine Pesticides (Ultra-trace)	EP131A	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
PAH Compounds in Water	EP132-LL	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
PCB's (Ultra-trace) for Catchment Monitoring	EP131B-ST	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Semivolatle Compounds by GCMS(SIM - Ultra-trace)	EP132	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
<b>Laboratory Control Samples (LCS)</b>						
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	20	5.00	15.00	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	20	5.00	10.00	NEPM 2013 B3 & ALS QC Standard
<b>Matrix Spikes (MS)</b>						



Matrix: **WATER**

Quality Control Sample Type	Method	Count		Rate (%)		Quality Control Specification
		QC	Regular	Actual	Expected	
Analytical Methods						
Matrix Spikes (MS) - Continued						
Organochlorine Pesticides (Ultra-trace)	EP131A	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
PAH Compounds in Water	EP132-LL	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
PCB's (Ultra-trace) for Catchment Monitoring	EP131B-ST	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	0	8	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

### Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: \* = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
<b>EA015: Total Dissolved Solids dried at 180 ± 5 °C</b>							
Clear Plastic Bottle - Natural (EA015) QC02	28-Oct-2025	----	----	----	04-Nov-2025	04-Nov-2025	✓
<b>ED037P: Alkalinity by PC Titrator</b>							
Clear Plastic Bottle - Natural (ED037-P) QC02	28-Oct-2025	----	----	----	31-Oct-2025	11-Nov-2025	✓
<b>ED041G: Sulfate (Turbidimetric) as SO4 2- by DA</b>							
Clear Plastic Bottle - Natural (ED041G) QC02	28-Oct-2025	----	----	----	31-Oct-2025	25-Nov-2025	✓
<b>ED045G: Chloride by Discrete Analyser</b>							
Clear Plastic Bottle - Natural (ED045G) QC02	28-Oct-2025	----	----	----	31-Oct-2025	25-Nov-2025	✓
<b>ED093F: Dissolved Major Cations</b>							
Clear Plastic Bottle - Filtered; Lab-acidified (ED093F) QC02	28-Oct-2025	----	----	----	03-Nov-2025	25-Nov-2025	✓
<b>EG020F: Dissolved Metals by ICP-MS</b>							
Clear Plastic Bottle - Filtered; Lab-acidified (EG020A-F) QC02	28-Oct-2025	----	----	----	03-Nov-2025	26-Apr-2026	✓
<b>EG020T: Total Metals by ICP-MS</b>							
Clear Plastic Bottle - Unfiltered; Lab-acidified (EG020A-T) QC02	28-Oct-2025	05-Nov-2025	26-Apr-2026	✓	05-Nov-2025	26-Apr-2026	✓



Matrix: WATER

Evaluation: ✘ = Holding time breach ; ✔ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
<b>EG035F: Dissolved Mercury by FIMS</b>							
Clear Plastic Bottle - Filtered; Lab-acidified (EG035F) QC02	28-Oct-2025	----	----	----	03-Nov-2025	25-Nov-2025	✔
<b>EK055G: Ammonia as N by Discrete Analyser</b>							
Clear Plastic Bottle - Sulfuric Acid (EK055G) QC02	28-Oct-2025	----	----	----	30-Oct-2025	25-Nov-2025	✔
<b>EK057G: Nitrite as N by Discrete Analyser</b>							
Clear Plastic Bottle - Natural (EK057G) QC02	28-Oct-2025	----	----	----	31-Oct-2025	30-Oct-2025	✘
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser</b>							
Clear Plastic Bottle - Sulfuric Acid (EK059G) QC02	28-Oct-2025	----	----	----	31-Oct-2025	25-Nov-2025	✔
<b>EK061G: Total Kjeldahl Nitrogen By Discrete Analyser</b>							
Clear Plastic Bottle - Sulfuric Acid (EK061G) QC02	28-Oct-2025	06-Nov-2025	25-Nov-2025	✔	06-Nov-2025	25-Nov-2025	✔
<b>EK067G: Total Phosphorus as P by Discrete Analyser</b>							
Clear Plastic Bottle - Sulfuric Acid (EK067G) QC02	28-Oct-2025	06-Nov-2025	25-Nov-2025	✔	06-Nov-2025	25-Nov-2025	✔
<b>EP005: Total Organic Carbon (TOC)</b>							
Amber TOC Vial - Sulfuric Acid (EP005) QC02	28-Oct-2025	----	----	----	31-Oct-2025	25-Nov-2025	✔
<b>EP026SP: Chemical Oxygen Demand (Spectrophotometric)</b>							
Clear Plastic Bottle - Sulfuric Acid (EP026SP) QC02	28-Oct-2025	----	----	----	02-Nov-2025	25-Nov-2025	✔
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>							
Amber VOC Vial - Sulfuric Acid (EP074) QC02	28-Oct-2025	03-Nov-2025	11-Nov-2025	✔	03-Nov-2025	11-Nov-2025	✔
<b>EP074B: Oxygenated Compounds</b>							
Amber VOC Vial - Sulfuric Acid (EP074) QC02	28-Oct-2025	03-Nov-2025	11-Nov-2025	✔	03-Nov-2025	11-Nov-2025	✔
<b>EP074C: Sulfonated Compounds</b>							
Amber VOC Vial - Sulfuric Acid (EP074) QC02	28-Oct-2025	03-Nov-2025	11-Nov-2025	✔	03-Nov-2025	11-Nov-2025	✔
<b>EP074D: Fumigants</b>							
Amber VOC Vial - Sulfuric Acid (EP074) QC02	28-Oct-2025	03-Nov-2025	11-Nov-2025	✔	03-Nov-2025	11-Nov-2025	✔
<b>EP074E: Halogenated Aliphatic Compounds</b>							
Amber VOC Vial - Sulfuric Acid (EP074) QC02	28-Oct-2025	03-Nov-2025	11-Nov-2025	✔	03-Nov-2025	11-Nov-2025	✔



Matrix: **WATER** Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
<b>EP074F: Halogenated Aromatic Compounds</b>							
Amber VOC Vial - Sulfuric Acid (EP074) QC02	28-Oct-2025	03-Nov-2025	11-Nov-2025	✔	03-Nov-2025	11-Nov-2025	✔
<b>EP074G: Trihalomethanes</b>							
Amber VOC Vial - Sulfuric Acid (EP074) QC02	28-Oct-2025	03-Nov-2025	11-Nov-2025	✔	03-Nov-2025	11-Nov-2025	✔
<b>EP074H: Naphthalene</b>							
Amber VOC Vial - Sulfuric Acid (EP074) QC02	28-Oct-2025	03-Nov-2025	11-Nov-2025	✔	03-Nov-2025	11-Nov-2025	✔
<b>EP080/071: Total Petroleum Hydrocarbons</b>							
Amber Glass Bottle - Unpreserved (EP071) QC02	28-Oct-2025	03-Nov-2025	04-Nov-2025	✔	05-Nov-2025	13-Dec-2025	✔
Amber VOC Vial - Sulfuric Acid (EP080) QC02	28-Oct-2025	03-Nov-2025	11-Nov-2025	✔	03-Nov-2025	11-Nov-2025	✔
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>							
Amber Glass Bottle - Unpreserved (EP071) QC02	28-Oct-2025	03-Nov-2025	04-Nov-2025	✔	05-Nov-2025	13-Dec-2025	✔
Amber VOC Vial - Sulfuric Acid (EP080) QC02	28-Oct-2025	03-Nov-2025	11-Nov-2025	✔	03-Nov-2025	11-Nov-2025	✔
<b>EP080: BTEXN</b>							
Amber VOC Vial - Sulfuric Acid (EP080) QC02	28-Oct-2025	03-Nov-2025	11-Nov-2025	✔	03-Nov-2025	11-Nov-2025	✔
<b>EP131A: Organochlorine Pesticides</b>							
Amber Glass Bottle - Unpreserved (EP131A) QC02	28-Oct-2025	04-Nov-2025	04-Nov-2025	✔	05-Nov-2025	14-Dec-2025	✔
<b>EP131B: Polychlorinated Biphenyls (as Aroclors)</b>							
Amber Glass Bottle - Unpreserved (EP131B-ST) QC02	28-Oct-2025	04-Nov-2025	04-Nov-2025	✔	05-Nov-2025	14-Dec-2025	✔
<b>EP132A: Phenolic Compounds</b>							
Amber Glass Bottle - Unpreserved (EP132) QC02	28-Oct-2025	03-Nov-2025	04-Nov-2025	✔	04-Nov-2025	13-Dec-2025	✔
<b>EP132B: Polynuclear Aromatic Hydrocarbons</b>							
Amber Glass Bottle - Unpreserved (EP132-LL) QC02	28-Oct-2025	03-Nov-2025	04-Nov-2025	✔	05-Nov-2025	13-Dec-2025	✔
<b>EP234A: OP Pesticides</b>							
Amber Glass Bottle - Unpreserved (EP234-1x) QC02	28-Oct-2025	----	----	----	03-Nov-2025	04-Nov-2025	✔
<b>EP234H: Triazine Herbicides</b>							
Amber Glass Bottle - Unpreserved (EP234-1) QC02	28-Oct-2025	----	----	----	03-Nov-2025	04-Nov-2025	✔



## Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Reular	Actual	Expected	Evaluation	
<b>Laboratory Duplicates (DUP)</b>							
Alkalinity by Auto Titrator	ED037-P	2	20	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	2	19	10.53	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Chemical Oxygen Demand (COD) (Spectrophotometric)	EP026SP	2	20	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	8	12.50	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	2	20	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	16	12.50	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	2	14	14.29	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	2	15	13.33	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	2	10	20.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Organochlorine Pesticides (Ultra-trace)	EP131A	0	1	0.00	10.00	✖	NEPM 2013 B3 & ALS QC Standard
PAH Compounds in Water	EP132-LL	0	1	0.00	10.00	✖	NEPM 2013 B3 & ALS QC Standard
PCB's (Ultra-trace) for Catchment Monitoring	EP131B-ST	0	1	0.00	10.00	✖	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode)	EP234-1	1	7	14.29	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode) - extended	EP234-1x	1	1	100.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	0	1	0.00	10.00	✖	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	17	11.76	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids	EA015	1	1	100.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	2	20	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	2	8	25.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Organic Carbon	EP005	2	20	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	2	20	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	13	15.38	10.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	3	33.33	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	2	15	13.33	10.00	✔	NEPM 2013 B3 & ALS QC Standard
<b>Laboratory Control Samples (LCS)</b>							
Alkalinity by Auto Titrator	ED037-P	2	20	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Chemical Oxygen Demand (COD) (Spectrophotometric)	EP026SP	2	20	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	8	25.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	16	6.25	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	14	7.14	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	15	6.67	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	10	10.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Organochlorine Pesticides (Ultra-trace)	EP131A	1	1	100.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
PAH Compounds in Water	EP132-LL	1	1	100.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard



Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification .

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
<b>Analytical Methods</b>							
<b>Laboratory Control Samples (LCS) - Continued</b>							
PCB's (Ultra-trace) for Catchment Monitoring	EP131B-ST	1	1	100.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode)	EP234-1	1	7	14.29	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode) - extended	EP234-1x	1	1	100.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	1	1	100.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	17	11.76	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids	EA015	3	1	300.00	15.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	20	5.00	15.00	✖	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	8	12.50	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Organic Carbon	EP005	2	20	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	20	5.00	10.00	✖	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	13	7.69	5.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	3	33.33	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	15	6.67	5.00	✔	NEPM 2013 B3 & ALS QC Standard
<b>Method Blanks (MB)</b>							
Ammonia as N by Discrete analyser	EK055G	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Chemical Oxygen Demand (COD) (Spectrophotometric)	EP026SP	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	8	12.50	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	16	6.25	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	14	7.14	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	15	6.67	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	10	10.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Organochlorine Pesticides (Ultra-trace)	EP131A	1	1	100.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
PAH Compounds in Water	EP132-LL	1	1	100.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
PCB's (Ultra-trace) for Catchment Monitoring	EP131B-ST	1	1	100.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode)	EP234-1	1	7	14.29	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode) - extended	EP234-1x	1	1	100.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	1	1	100.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	17	5.88	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids	EA015	1	1	100.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	8	12.50	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Organic Carbon	EP005	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	13	7.69	5.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	3	33.33	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	15	6.67	5.00	✔	NEPM 2013 B3 & ALS QC Standard
<b>Matrix Spikes (MS)</b>							
Ammonia as N by Discrete analyser	EK055G	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Chemical Oxygen Demand (COD) (Spectrophotometric)	EP026SP	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard



Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification .

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
<b>Analytical Methods</b>							
<b>Matrix Spikes (MS) - Continued</b>							
Chloride by Discrete Analyser	ED045G	1	8	12.50	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	16	6.25	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	15	6.67	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	10	10.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Organochlorine Pesticides (Ultra-trace)	EP131A	0	1	0.00	5.00	✖	NEPM 2013 B3 & ALS QC Standard
PAH Compounds in Water	EP132-LL	0	1	0.00	5.00	✖	NEPM 2013 B3 & ALS QC Standard
PCB's (Ultra-trace) for Catchment Monitoring	EP131B-ST	0	1	0.00	5.00	✖	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode)	EP234-1	1	7	14.29	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode) - extended	EP234-1x	1	1	100.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	0	1	0.00	5.00	✖	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	17	5.88	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	0	8	0.00	5.00	✖	NEPM 2013 B3 & ALS QC Standard
Total Organic Carbon	EP005	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	13	7.69	5.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	3	33.33	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	15	6.67	5.00	✔	NEPM 2013 B3 & ALS QC Standard



## Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Total Dissolved Solids	EA015	WATER	In house: Referenced to APHA 2540C. A gravimetric procedure that determines the amount of 'filterable' residue in an aqueous sample. A well-mixed sample is filtered through a glass fibre filter (1.2um). The filtrate is evaporated to dryness and dried to constant weight at 180+/-5C. This method is compliant with NEPM Schedule B(3)
Alkalinity by Auto Titrator	ED037-P	WATER	In house: Referenced to APHA 2320 B This procedure determines alkalinity by automated measurement (e.g. Auto Titrator) on a settled supernatant aliquot of the sample using pH 4.5 for indicating the total alkalinity end-point. This method is compliant with NEPM Schedule B(3)
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	WATER	In house: Referenced to APHA 4500-SO4. Dissolved sulfate is determined in a 0.45um filtered sample. Sulfate ions are converted to a barium sulfate suspension in an acetic acid medium with barium chloride. Light absorbance of the BaSO4 suspension is measured by a photometer and the SO4-2 concentration is determined by comparison of the reading with a standard curve. This method is compliant with NEPM Schedule B(3)
Chloride by Discrete Analyser	ED045G	WATER	In house: Referenced to APHA 4500 Cl - G. The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride. In the presence of ferric ions the liberated thiocyanate forms highly-coloured ferric thiocyanate which is measured at 480 nm.
Major Cations - Dissolved	ED093F	WATER	In house: Referenced to APHA 3120 and 3125; USEPA SW 846 - 6010 and 6020; Cations are determined by either ICP-AES or ICP-MS techniques. This method is compliant with NEPM Schedule B(3) Sodium Adsorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM Schedule B(3) Hardness parameters are calculated based on APHA 2340 B. This method is compliant with NEPM Schedule B(3)
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
Ammonia as N by Discrete analyser	EK055G	WATER	In house: Referenced to APHA 4500-NH3 G Ammonia is determined by direct colorimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Nitrite as N by Discrete Analyser	EK057G	WATER	In house: Referenced to APHA 4500-NO2- B. Nitrite is determined by direct colourimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)



Analytical Methods	Method	Matrix	Method Descriptions
Nitrate as N by Discrete Analyser	EK058G	WATER	In house: Referenced to APHA 4500-NO3- F. Nitrate is reduced to nitrite by way of a chemical reduction followed by quantification by Discrete Analyser. Nitrite is determined separately by direct colourimetry and result for Nitrate calculated as the difference between the two results. This method is compliant with NEPM Schedule B(3)
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	WATER	In house: Referenced to APHA 4500-NO3- F. Combined oxidised Nitrogen (NO2+NO3) is determined by Chemical Reduction and direct colourimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	WATER	In house: Referenced to APHA 4500-Norg D (In house). An aliquot of sample is digested using a high temperature Kjeldahl digestion to convert nitrogenous compounds to ammonia. Ammonia is determined colorimetrically by discrete analyser. This method is compliant with NEPM Schedule B(3)
Total Nitrogen as N (TKN + Nox) By Discrete Analyser	EK062G	WATER	In house: Referenced to APHA 4500-Norg / 4500-NO3-. This method is compliant with NEPM Schedule B(3)
Total Phosphorus as P By Discrete Analyser	EK067G	WATER	In house: Referenced to APHA 4500-P H, Jirka et al, Zhang et al. This procedure involves sulphuric acid digestion of a sample aliquot to break phosphorus down to orthophosphate. The orthophosphate reacts with ammonium molybdate and antimony potassium tartrate to form a complex which is then reduced and its concentration measured at 880nm using discrete analyser. This method is compliant with NEPM Schedule B(3)
Ionic Balance by PCT DA and Turbi SO4 DA	* EN055 - PG	WATER	In house: Referenced to APHA 1030E. This method is compliant with NEPM Schedule B(3)
Total Organic Carbon	EP005	WATER	In house: Referenced to APHA 5310 B, The automated TOC analyzer determines Total and Inorganic Carbon by IR cell. TOC is calculated as the difference. This method is compliant with NEPM Schedule B(3)
Chemical Oxygen Demand (COD) (Spectrophotometric)	EP026SP	WATER	In house: Referenced to APHA 5220 D. Samples are digested with a known excess of an acidic potassium dichromate solution using silver sulfate as a catalyst. The chromium is reduced from the Cr (VI) oxidation state to the Cr (III) state by the oxygen present in the organic material. Both of these chromium species are coloured and absorb in the visible region of (400nm & 600nm) the spectrum. The oxidisable organic matter can be calculated in terms of oxygen equivalents.
TRH - Semivolatle Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015 The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM Schedule B(3)
Volatile Organic Compounds	EP074	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)
Organochlorine Pesticides (Ultra-trace)	EP131A	WATER	In house: Referenced to USEPA Method 3640 (GPC cleanup),3620 (Florisil), 8081/8082 (GC/μECD/uECD). This method is compliant with NEPM Schedule B(3)
PCB's (Ultra-trace) for Catchment Monitoring	EP131B-ST	WATER	In house: Referenced to USEPA Method 3640 (GPC cleanup),3620 (Florisil), 8081/8082 (GC/μECD/μECD). This method is compliant with NEPM Schedule B(3)
Semivolatle Compounds by GCMS(SIM - Ultra-trace)	EP132	WATER	In house: Referenced to USEPA 3640 (GPC Cleanup), 8270 GCMS Capillary column, SIM mode. This method is compliant with NEPM Schedule B(3)



Analytical Methods	Method	Matrix	Method Descriptions
PAH Compounds in Water	EP132-LL	WATER	In house, Samples are extracted into solvent in original containers. Determination by large volume injection GCMS in selected ion monitoring (SIM) mode.
Pesticides by LCMSMS (Positive Ion Mode)	EP234-1	WATER	In house: LC-MSMS, direct injection. A sample is filtered and injected directly onto the LC-MSMS. Analysis is by LC/MSMS, ESI Positive Mode.
Pesticides by LCMSMS (Positive Ion Mode) - extended	EP234-1x	WATER	In house: LC-MSMS, direct injection. A sample is filtered and injected directly onto the LC-MSMS. Analysis is by LC/MSMS, ESI Positive Mode.

Preparation Methods	Method	Matrix	Method Descriptions
TKN/TP Digestion	EK061/EK067	WATER	In house: Referenced to APHA 4500 Norg - D; APHA 4500 P - H. This method is compliant with NEPM Schedule B(3)
Digestion for Total Recoverable Metals	EN25	WATER	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM Schedule B(3)
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Sep. Funnel Extraction /Acetylation of Phenolic Compounds	ORG14-AC	WATER	In house: Referenced to USEPA 3510 (Extraction) / In-house (Acetylation): A 1L sample is extracted into dichloromethane and concentrated to 1 mL with exchange into cyclohexane. Phenolic compounds are reacted with acetic anhydride to yield phenyl acetates suitable for ultra-trace analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Sep. Funnel Extraction of Liquids (Ultra-trace pesticides.)	ORG14-UTP	WATER	In house: Referenced to USEPA 3510 Samples are extracted into dichloromethane, concentrated and exchanged into an appropriate solvent for GPC and florisil cleanup as required. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.




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